GEOTECHNICAL INVESTIGATIONS

Highway Construction
Km 1738.3 to 1750.2 Highway #1
Yukon, 2002-2003
Volume 1 of 4

Yukon
Community and Transportation Services
Transportation Engineering Branch

Geotechnical Services

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Highway Construction
Km 1738.3 to 1750.2
Alaska Highway #1
Yukon 2002-2003
Volume 1 of 4

This Data Package prepared for project viewing:

March, 2002

Transportation Engineering Branch
Geotechnical Services
461 Range Road
Whitehorse, Yukon

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INTRODUCTION

Investigation notes, classification methods and legends.

CENTRELINE TESTING ALASKA HIGHWAY

Subsurface Exploration and Testing ReportSheets are provided.
The reports for the centreline holes are arranged according to project location, starting at Km 1775+500 and increasing to Km 1786+500.

TEST HOLES 1292 to 1326	shown with prefix 541-
TEST HOLES 1327 to 1333	shown with prefix 542-
TEST HOLES 1334 to 1369	shown with prefix 543-
TEST HOLES 1370 to 1400	shown with prefix 544-
TEST HOLES 287 to 332	shown with prefix 611-
TEST HOLES 333 to 353	shown with prefix 612-

NOTE:
Centreline Test Hole locations indicated on the Subsurface Exploration and Testing Report Sheets are approximate. Actual Test Hole locations, located by GPS survey or field survey, are as shown on project plans.

CONTENTS (continued)

Volume 2 of 4

CENTRELINE TESTING ALASKA HIGHWAY

Laboratory Testing Result Sheets are provided.
The reports for the centreline holes are arranged according to test hole number, starting at 541-1292 and increasing to 612-353.

TEST HOLES 1292 to 1326	shown with prefix 541-
TEST HOLES 1327 to 1333	shown with prefix 542-
TEST HOLES 1334 to 1369	shown with prefix 543-
TEST HOLES 1370 to 1400	shown with prefix 544-
TEST HOLES 287 to 332	shown with prefix 611-
TEST HOLES 333 to 353	shown with prefix 612-

NOTE:

Centreline Test Hole locations indicated on the Subsurface Exploration and Testing Report Sheets are approximate. Actual Test Hole locations, located by GPS survey or field survey, are as shown on project plans.

CONTENTS (continued)

Volume 3 of 4

GRANULAR SOURCE Km 1738.8 RHS & LHS ALASKA HIGHWAY

Location plans and subsurface exploration and testing report sheets are provided.

Auger Testing

2001	TEST HOLES 344 & 345	shown with prefix 612-
2001	TEST HOLES 1891 to 1904	shown with prefix 622-

Backhoe Testing

2001	TEST PITS 1699 to 1713	shown with prefix 630-

CONTENTS (continued)

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GRANULAR SOURCE Km 1750.0 LHS ALASKA HIGHWAY

Location plans, photographs, and subsurface exploration and testing report sheets are provided.

Auger Testing

1985	TEST HOLES 32 and 37 to 40	shown with prefix 777-
2001	TEST HOLES 1948 to 1964	shown with prefix 625-

Backhoe Testing

1985	TEST PITS 108 to 112	shown with prefix 808-
1988	TEST PITS 1 to 21	shown with prefix 029-
1988	TEST PITS 22 to 39	shown with prefix 030-
2002	TEST PITS 1 to 25	shown with prefix 631-

INTRODUCTION

GEOTECHNICAL INVESTIGATION DATA

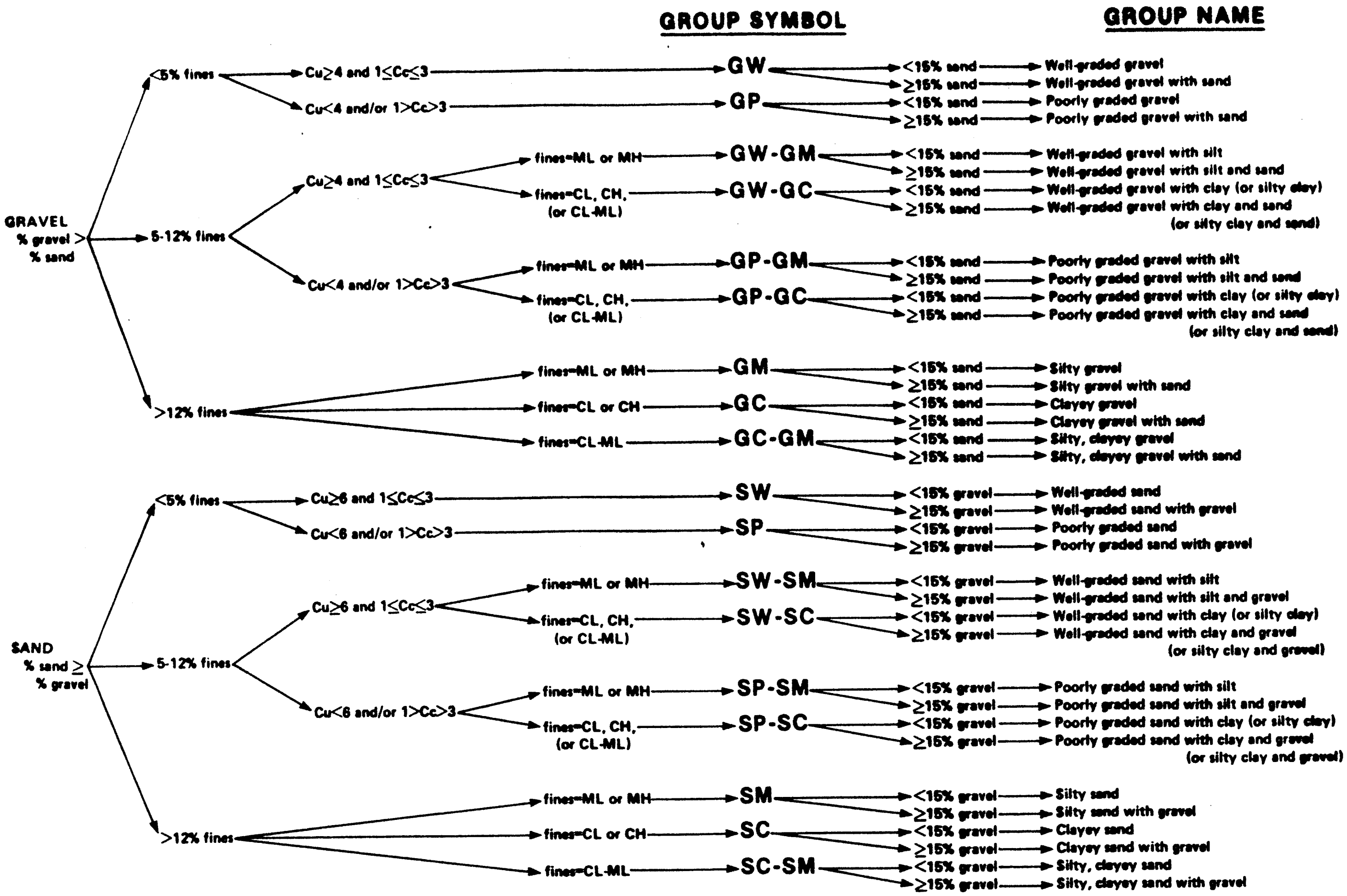
This geotechnical investigation data is provided to assist in the interpretation of soil conditions encountered within this project area. The data presented was prepared solely for Departmental designing and estimating purposes.

The description of material / soil description shown on the subsurface exploration and test reports is a textural description based on identification of retrieved material by the field drilling technician at the time of investigation. This description may be modified following laboratory testing and classification of selected samples. The system used is based on the ASTM standards for identification and classification of soils. Permafrost classifications and groundwater levels are indicated as detected at time of drilling, unless otherwise noted. Changes in moisture or frost conditions should be anticipated depending on the season, time lapse or amount of development work done since the date of investigation.

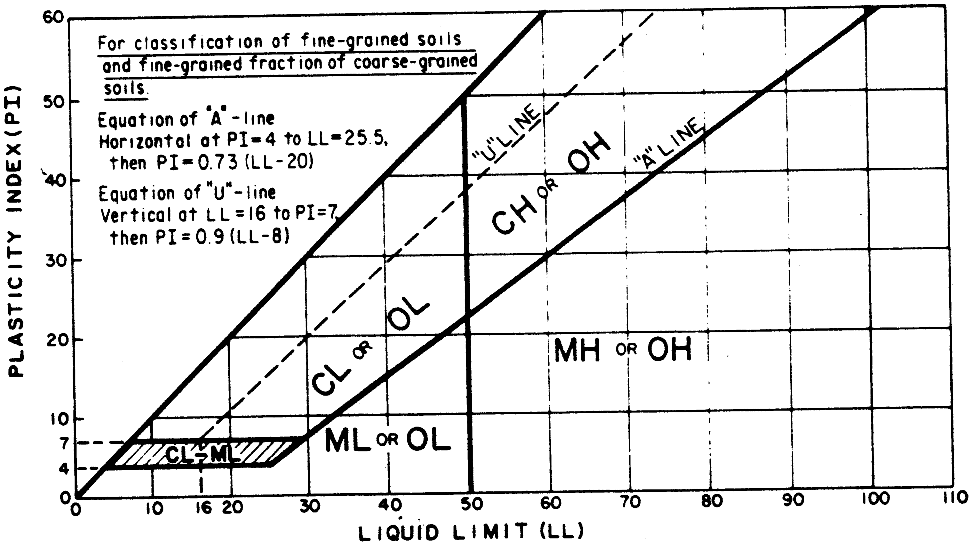
The sample identification and laboratory testing data is provided to give detailed physical properties of selected retrieved samples within the subsurface profile. ***These tests may be conducted on disturbed samples and may exhibit properties different from the native materials. The sample classification may also vary from the soil description due to variations within the sampled strata or because of changes resulting from the sampling method, excavation equipment used or testing preparation procedures.***

These descriptions are not intended to be conclusive as to the nature of any material encountered, or to conditions between or around the test borings/pits.

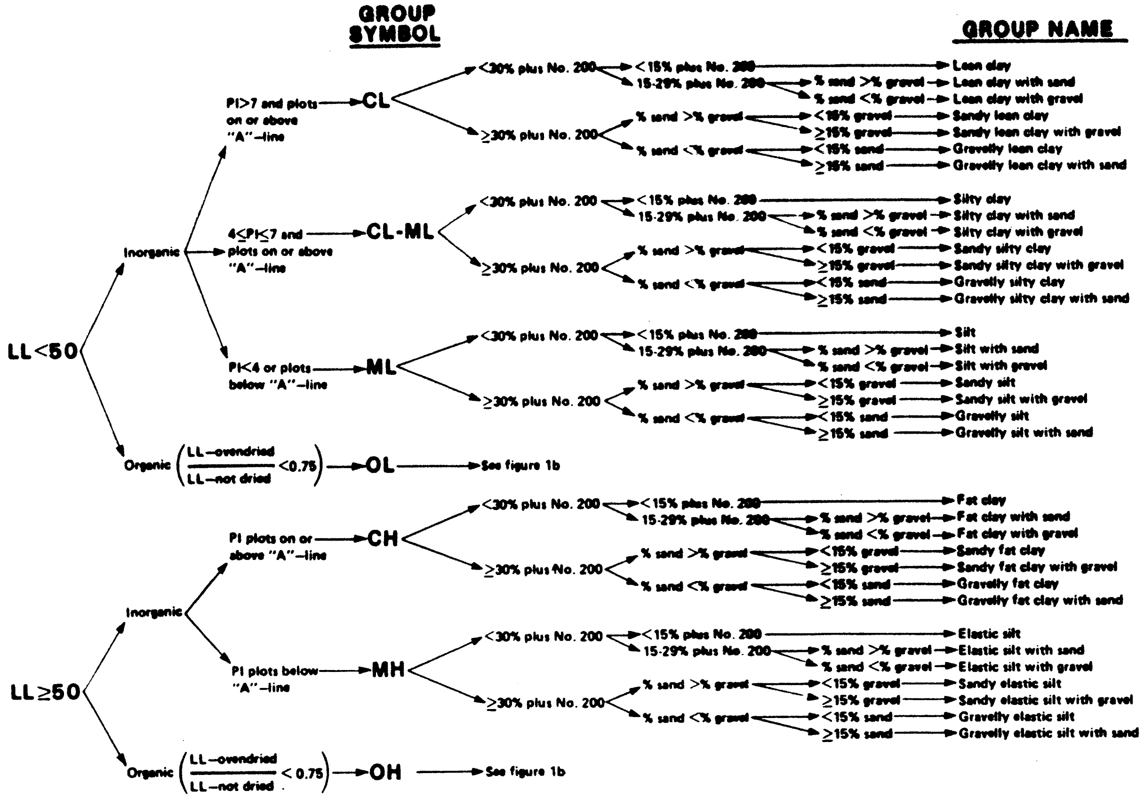
It is recommended that a site inspection, combined with consideration of the regional geology and climatic conditions be conducted. An evaluation of the investigation methods and development work done since the time of investigation should be done prior to interpreting the subsurface conditions at the site for construction purposes.



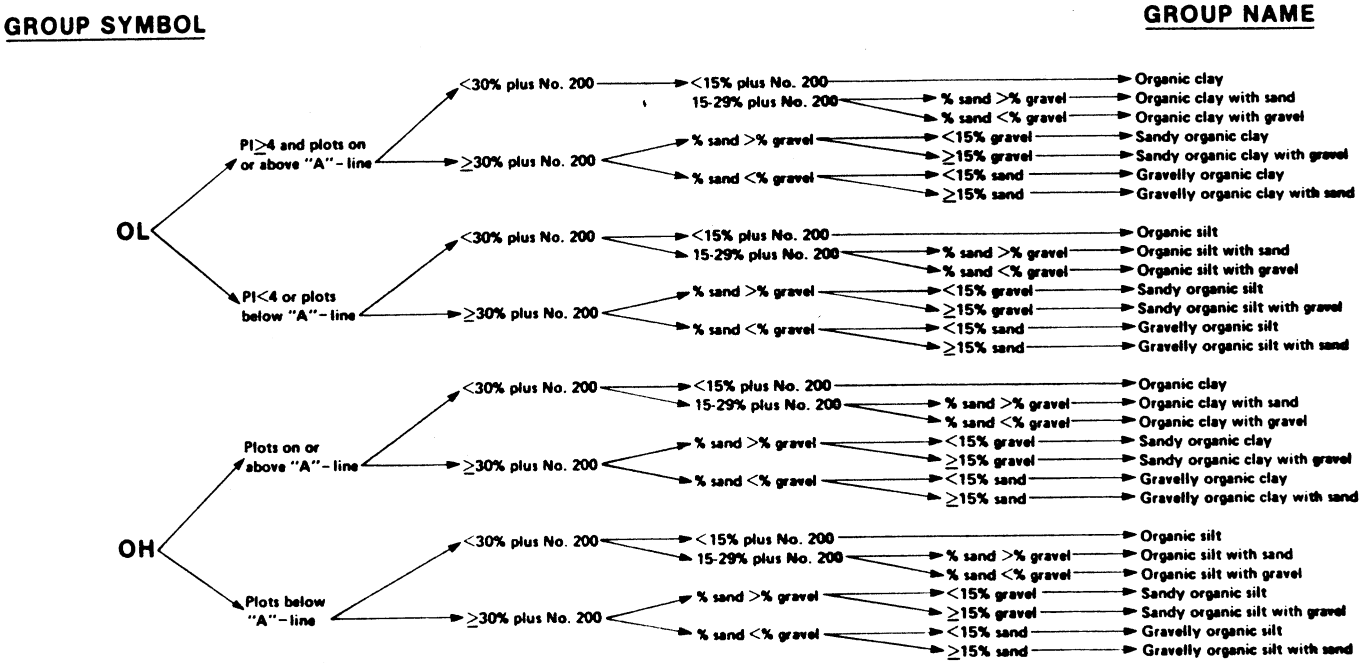
Flow chart for classifying coarse-grained soil.



Plasticity chart.



Flow chart for classifying fine-grained soil.



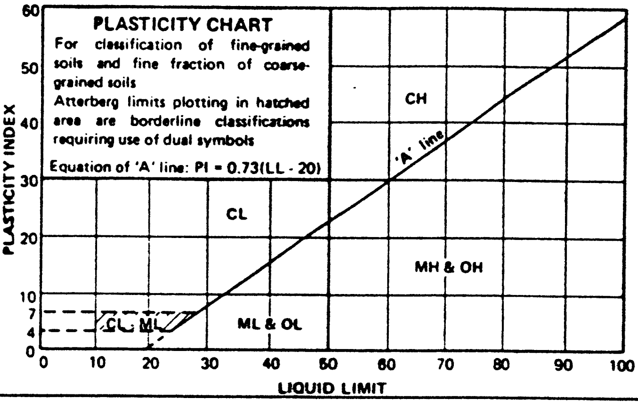
Flow chart for classifying organic soil.

CRITERIA FOR ASSIGNING GROUP SYMBOLS AND GROUP NAMES USING LABORATORY TESTS [a]				SOIL CLASSIFICATION	
				GROUP SYMBOL	GROUP NAME [b]
COARSE-GRAINED SOILS more than 50% retained on No. 200 sieve	GRAVELS More than 50% of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS Less than 5% fines [c]	$C_u \geq 4$ and $1 \leq C_c \leq 3$ [e]	GW	Well-graded gravel [f]
			$C_u < 4$ and/or $1 > C_c > 3$ [e]	GP	Poorly graded gravel [f]
		GRAVELS WITH FINES More than 12% fines [c]	Fines classify as ML or MH	GM	Silty gravel [f,g,h]
			Fines classify as CL or CH	GC	Clayey gravel [f,g,h]
	SANDS 50% or more of coarse fraction passes No. 4 sieve	CLEAN SANDS Less than 5% fines [d]	$C_u \geq 6$ and $1 \leq C_c \leq 3$ [e]	SW	Well-graded sand [i]
			$C_u < 6$ and/or $1 > C_c > 3$ [e]	SP	Poorly graded sand [i]
		SANDS WITH FINES More than 12% fines [d]	Fines classify as ML or MH	SM	Silty sand [g,h,i]
			Fines classify as CL or CH	SC	Clayey sand [g,h,i]
FINE-GRAINED SOILS 50% or more passed the No. 200 sieve	SILTS AND CLAYS Liquid limit less than 50%	inorganic	PI > 7 and plots on or above "A" line [j]	CL	Lean clay [k,l,m]
			PI < 4 or plots below "A" line [j]	ML	Silt [k,l,m]
		organic	$\frac{\text{Liquid limit - oven dried}}{\text{Liquid limit - not dried}} < 0.75$	OL	Organic clay [k, l, m, n] Organic silt [k, l, m, o]
	SILTS AND CLAYS Liquid limit 50% or more	inorganic	PI plots on or above "A" line	CH	Fat clay [k,l,m]
			PI plots below "A" line	MH	Elastic silt [k,l,m]
		organic	$\frac{\text{Liquid limit - oven dried}}{\text{Liquid limit - not dried}} < 0.75$	OH	Organic clay [k, l, m, p] Organic silt [k, l, m, q]
Highly organic soils		Primarily organic matter, dark in color, and organic odor		PT	Peat

a. Based on the material passing the 3-in (75-mm) sieve.
b. If field sample contained cobbles and/or boulders, add "with cobbles and/or boulders" to group name.
c. Gravels with 5 to 12% fines require dual symbols
  GW-GM well graded gravel with silt
  GW-GC well graded gravel with clay
  GP-GM poorly graded gravel with silt
  GP-GC poorly graded gravel with clay
d. Sands with 5 to 12% fines require dual symbols
  SW-SM well graded sand with silt
  SW-SC well graded sand with clay
  SP-SM poorly graded sand with silt
  SP-SC poorly graded sand with clay
e. $C_u = D_{60}/D_{10}$ $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$
f. If soil contains ≥ 15% sand, add "with sand" to group name.
g. If fines classify as CL-ML, use dual symbol GC-GM, SC-SM.
h. If fines are organic, add "with organic fines" to group name.
i. If soil contains ≥ 15% gravel, add "with gravel" to group name.
j. If Atterberg limits plot in hatched area, soil is a CL-ML, silty clay.
k. If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel" whichever is predominant.
l. If soil contains ≥ 30% plus No. 200, predominantly sand, add "sandy" to group name.
m. If soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.
n. PI > 4 and plots on or above "A" line.
o. PI < 4 or plots below "A" line.
p. PI plots on or above "A" line.
q. PI plots below "A" line.

Soil classification chart

UNIFIED SOIL CLASSIFICATION†

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES	CLASSIFICATION CRITERIA		
COARSE-GRAINED SOILS More than 50% retained on No. 200 sieve*	**GRAVELS** 50% or more of coarse fraction retained on No. 4 sieve	**CLEAN GRAVELS**	GW	Well-graded gravels and gravel-sand mixtures, little or no fines	Classification on basis of percentage of fines Less than 5% pass No. 200 sieve GW, GP, SW, SP More than 12% pass No. 200 sieve GM, GC, SM, SC 5% to 12% pass No. 200 sieve Borderline classification requiring use of dual symbols	$C_u = D_{60}/D_{10}$ Greater than 4 $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3	
			GP	Poorly-graded gravels and gravel-sand mixtures, little or no fines		Not meeting both criteria for GW	
		GRAVELS WITH FINES	GM	Silty gravels, gravel-sand-silt mixtures		Atterberg limits plot below 'A' line or plasticity index less than 4	Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols
			GC	Clayey gravels, gravel-sand clay mixtures		Atterberg limits plot above 'A' line and plasticity index greater than 7	
	SANDS More than 50% of coarse fraction passes No. 4 sieve	**CLEAN SANDS**	SW	Well-graded sands and gravelly sands, little or no fines		$C_u = D_{60}/D_{10}$ Greater than 6 $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3	
			SP	Poorly-graded sands and gravelly sands, little or no fines		Not meeting both criteria for SW	
		SANDS WITH FINES	SM	Silty sands, sand-silt mixtures		Atterberg limits plot below 'A' line or plasticity index less than 4	Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols
			SC	Clayey sands, sand-clay mixtures		Atterberg limits plot above 'A' line and plasticity index greater than 7	
FINE-GRAINED SOILS 50% or more passes No. 200 sieve*	**SILTS AND CLAYS**	Liquid limit 50% or less	ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands			
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays			
			OL	Organic silts and organic silty clays of low plasticity			
	SILTS AND CLAYS	Liquid limit greater than 50%	MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts			
			CH	Inorganic clay of high plasticity, fat clays			
			OH	Organic clays of medium to high plasticity			
HIGHLY ORGANIC SOILS			PT	Peat, muck and other highly organic soils	*Based on the material passing the 3 in. (75 mm) sieve †ASTM Designation D 2487, for identification procedure see D 2488		

GROUND ICE DESCRIPTION

ICE NOT VISIBLE

GROUP SYMBOLS	SYMBOLS	SUBGROUP DESCRIPTION	
N	Nf	Poorly-bonded or friable	
	Nbn	No excess ice, well-bonded	
	Nbe	Excess ice, well - bonded	

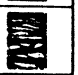
NOTE:

1. *Dual symbols are used to indicate borderline or mixed ice classifications*
2. *Visual estimates of ice contents indicated on borehole logs ± 5%*
3. *This system of ground ice description has been modified from NRC Technical Memo 79, Guide to the Field Description of Permafrost for Engineering Purposes*

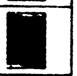
LEGEND

Soil ▨ Ice ■

VISIBLE ICE LESS THAN 50% BY VOLUME

GROUP SYMBOLS	SYMBOLS	SUBGROUP DESCRIPTION	
V	Vx	Individual ice crystals or inclusions	
	Vc	Ice coatings on particles	
	Vr	Random or irregularly oriented ice formations	
	Vs	Stratified or distinctly oriented ice formations	

VISIBLE ICE GREATER THAN 50% BY VOLUME

ICE	ICE + Soil Type	Ice with soil inclusions	
	ICE	Ice without soil inclusions (greater than 25 mm (1 in.) thick)	

	BOUNDARY LINES ON DRILL LOGS	TEST HOLE NO: 3
ENGINEERING-CAPITAL		Project No:
		ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▯ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	BOUNDARY LINES							0.0
	A solid line is used when a definite soil change is logged and a depth is known.							
1.0	A dashed line is used when a definite soil change is noted either by the field log or the sample test results and the depth of change is unknown.							1.0
2.0	A dotted line is used when a gradual or gradational change is noted by field notes and sample test results.							2.0
3.0								3.0
▼	A triangle over two lines indicates water level detected at the time of drilling, unless otherwise noted							▼
4.0								4.0
5.0								5.0
6.0								6.0

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Transportation Engineering	REVIEWED BY:	COMPLETE: / /
	Fig. No:	Page 1 of 1

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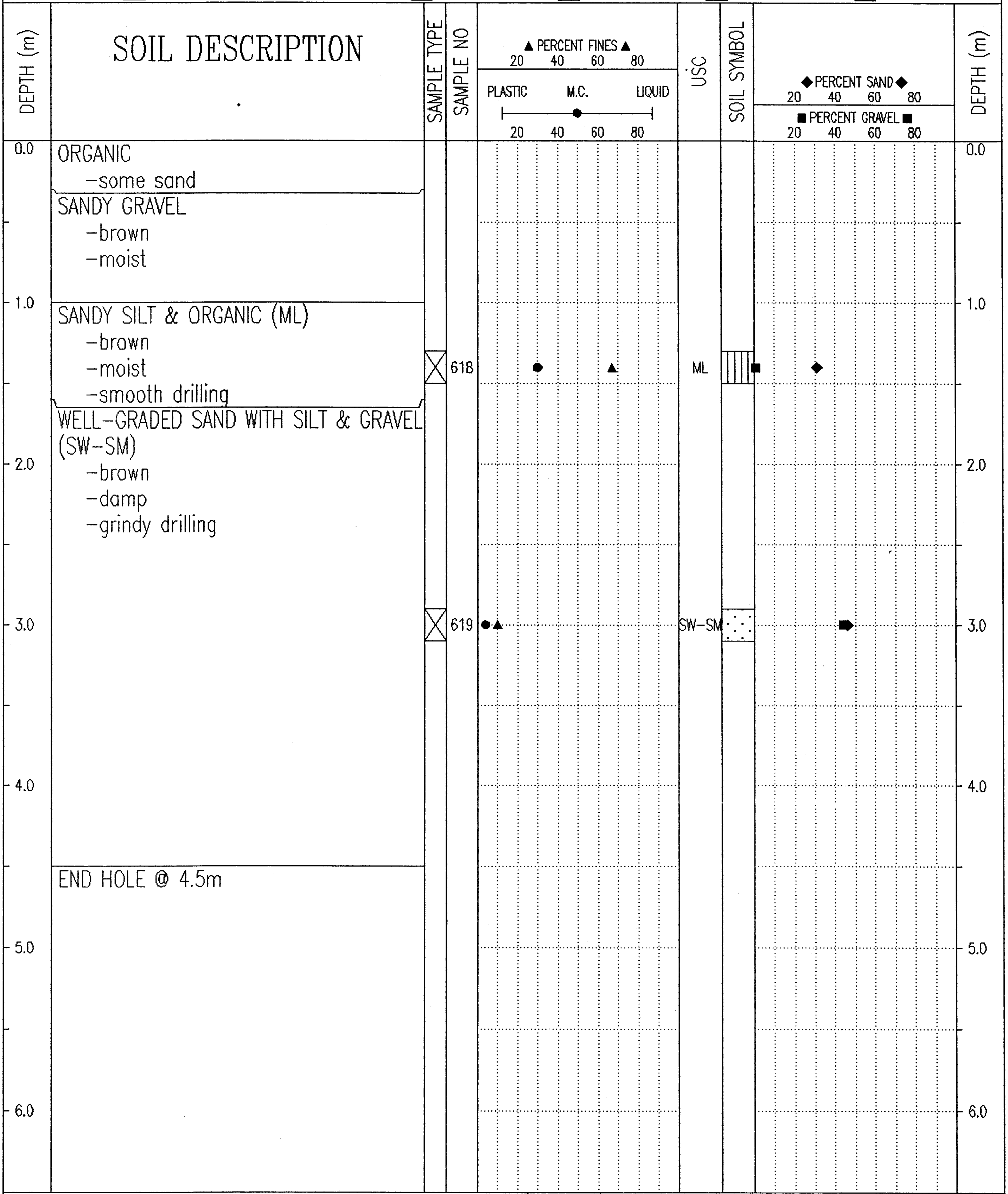
CENTRELINE TESTING
1738+163 to 1750+300
ALASKA HIGHWAY

SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 612-353
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1734+025 BK; 1738+163 AH 3m RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◸ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



0.0 ORGANIC
-some sand

SANDY GRAVEL
-brown
-moist

1.0 SANDY SILT & ORGANIC (ML)
-brown
-moist
-smooth drilling

WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)
-brown
-damp
-grindy drilling

END HOLE @ 4.5m

SAMPLE NO	USC
618	ML
619	SW-SM

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REVIEWED BY:	COMPLETE: 01/08/07
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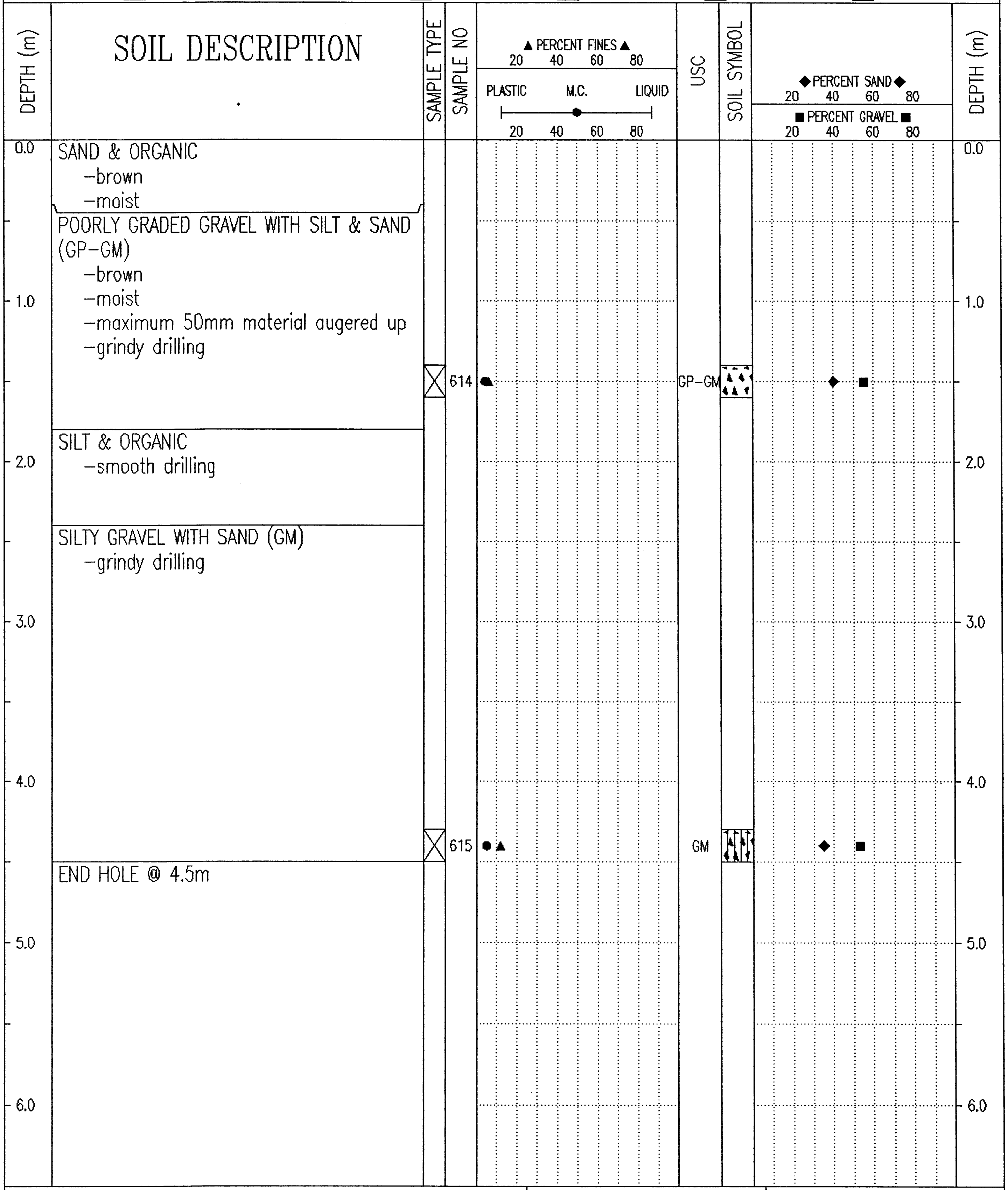
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 612-351
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1734+135 BK; 1738+273 AH C.L.	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◸ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



SAND & ORGANIC
-brown
-moist

POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)
-brown
-moist
-maximum 50mm material augered up
-grindy drilling

SILT & ORGANIC
-smooth drilling

SILTY GRAVEL WITH SAND (GM)
-grindy drilling

END HOLE @ 4.5m

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	REVIEWED BY:	COMPLETE: 01/08/07
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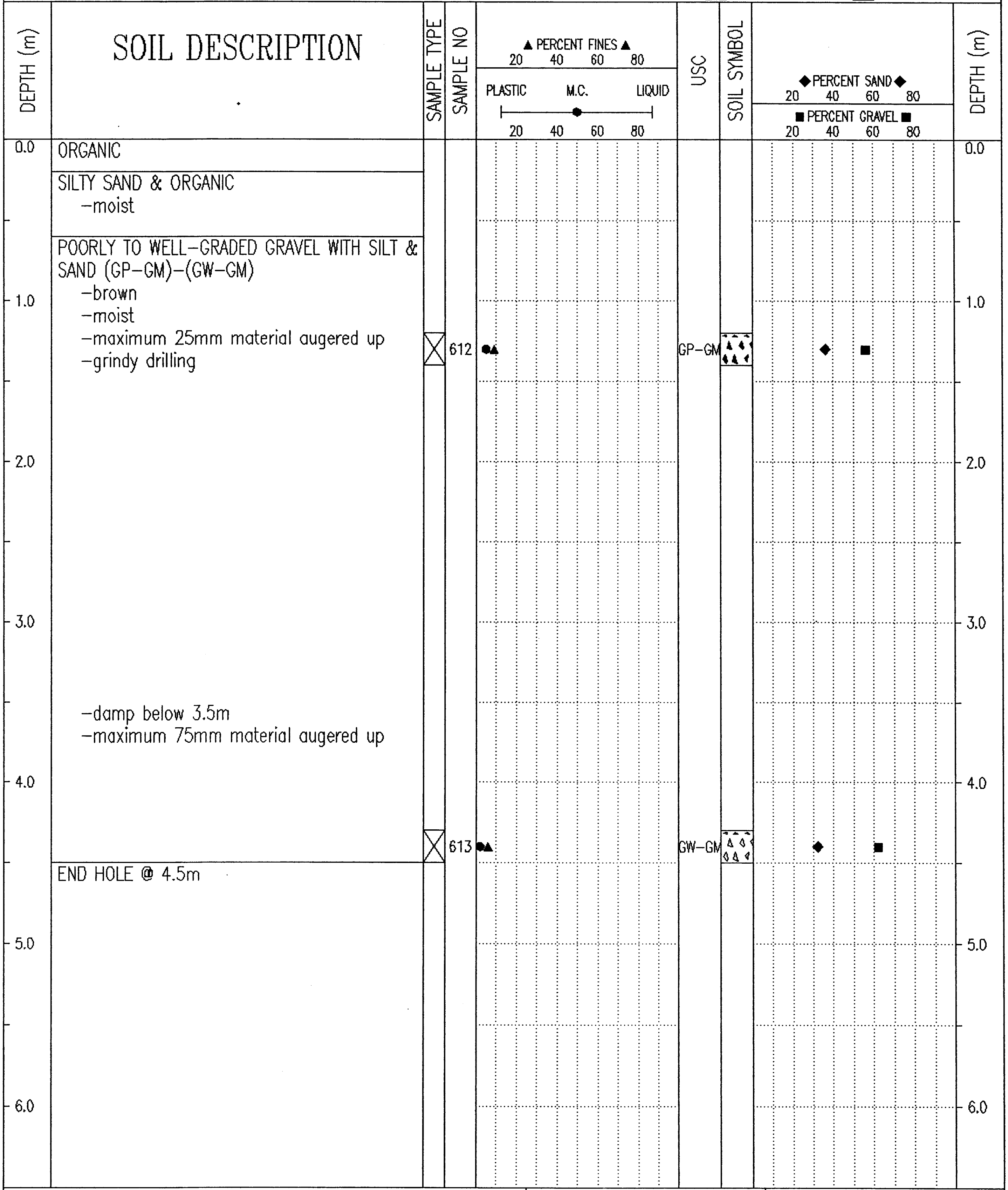
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 612-350
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1734+135 BK; 1738+273 AH 15m LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ◨ CORE



ORGANIC

SILTY SAND & ORGANIC
-moist

POORLY TO WELL-GRADED GRAVEL WITH SILT & SAND (GP-GM)-(GW-GM)
-brown
-moist
-maximum 25mm material augered up
-grindy drilling

-damp below 3.5m
-maximum 75mm material augered up

END HOLE @ 4.5m

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	REVIEWED BY:	COMPLETE: 01/08/06
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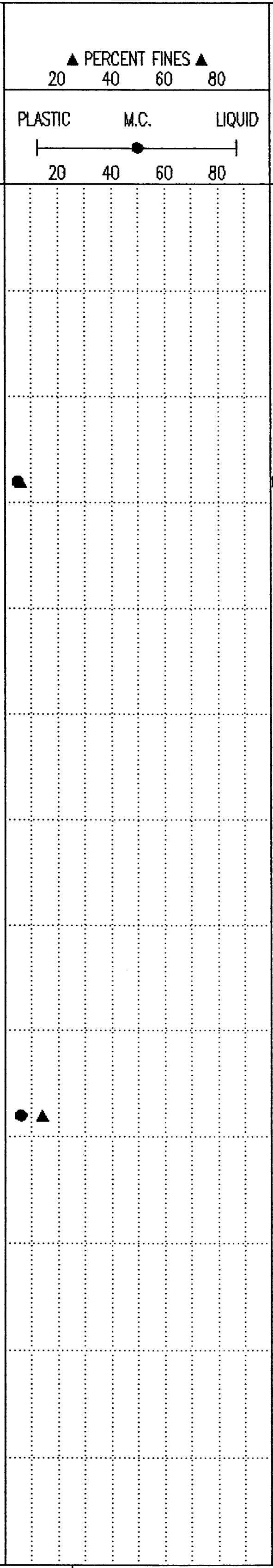
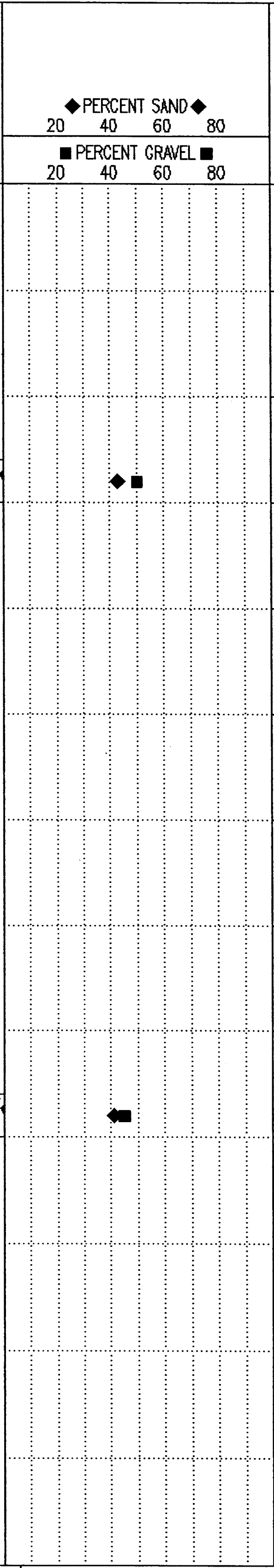
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 612-352
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1734+140 BK; 1738+278 AH 15m RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	SAND AND ORGANIC -brown -moist			
0.5	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown -moist -maximum 50mm material augered up -grindy drilling			
1.4		☒	616	GP-GM
2.5	ORGANIC & SILT -brown -moist -smooth drilling			
3.1	SILTY GRAVEL WITH SAND (GM) -brown -moist -maximum 75mm material augered up -grindy drilling			
4.4		☒	617	GM
4.5	END HOLE @ 4.5m			





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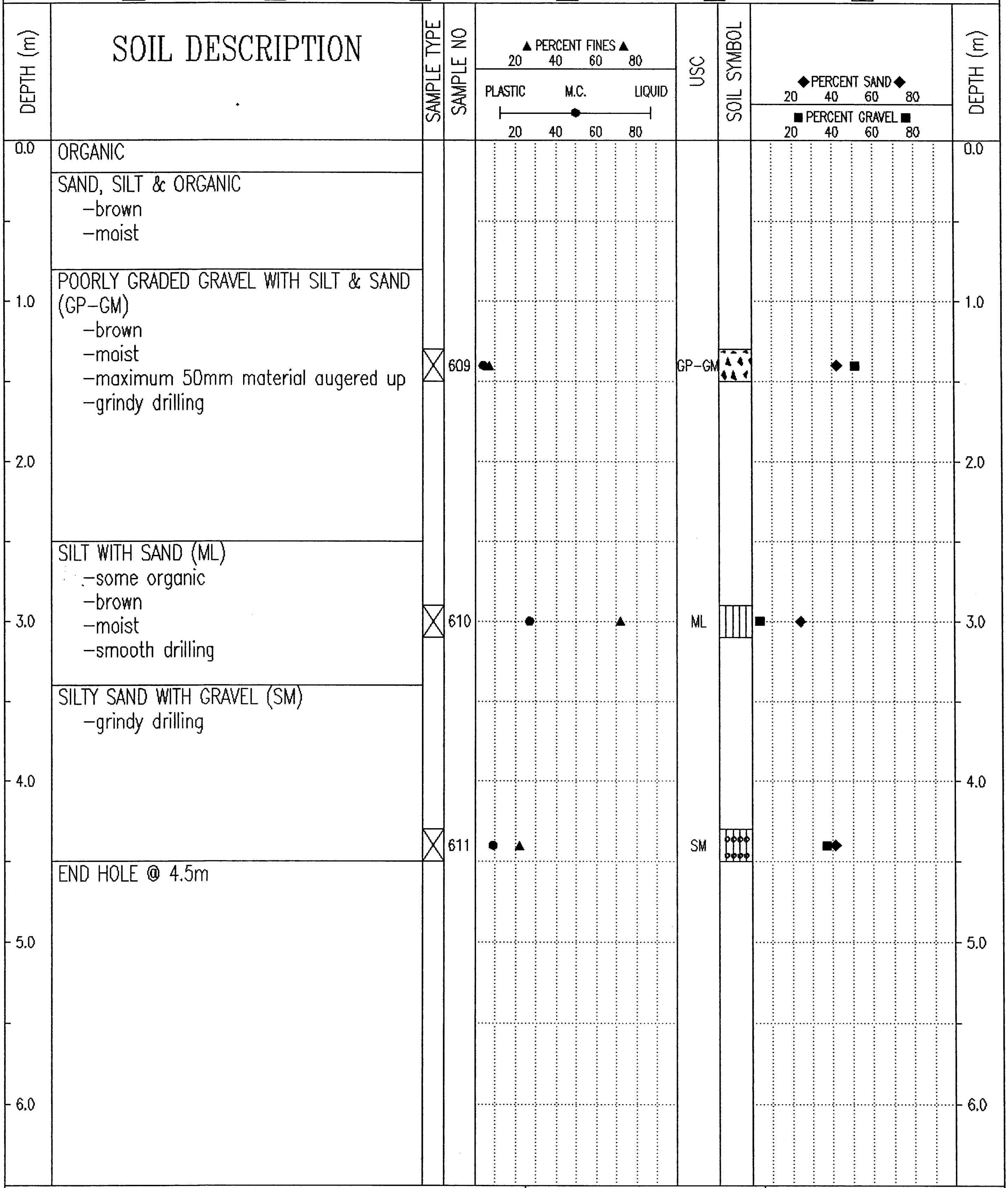
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 612-349
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1734+202 BK; 1738+340 AH 33m LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SOIL DESCRIPTION

ORGANIC

SAND, SILT & ORGANIC
- brown
- moist

POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)
- brown
- moist
- maximum 50mm material augered up
- grindy drilling

SILT WITH SAND (ML)
- some organic
- brown
- moist
- smooth drilling

SILTY SAND WITH GRAVEL (SM)
- grindy drilling

END HOLE @ 4.5m

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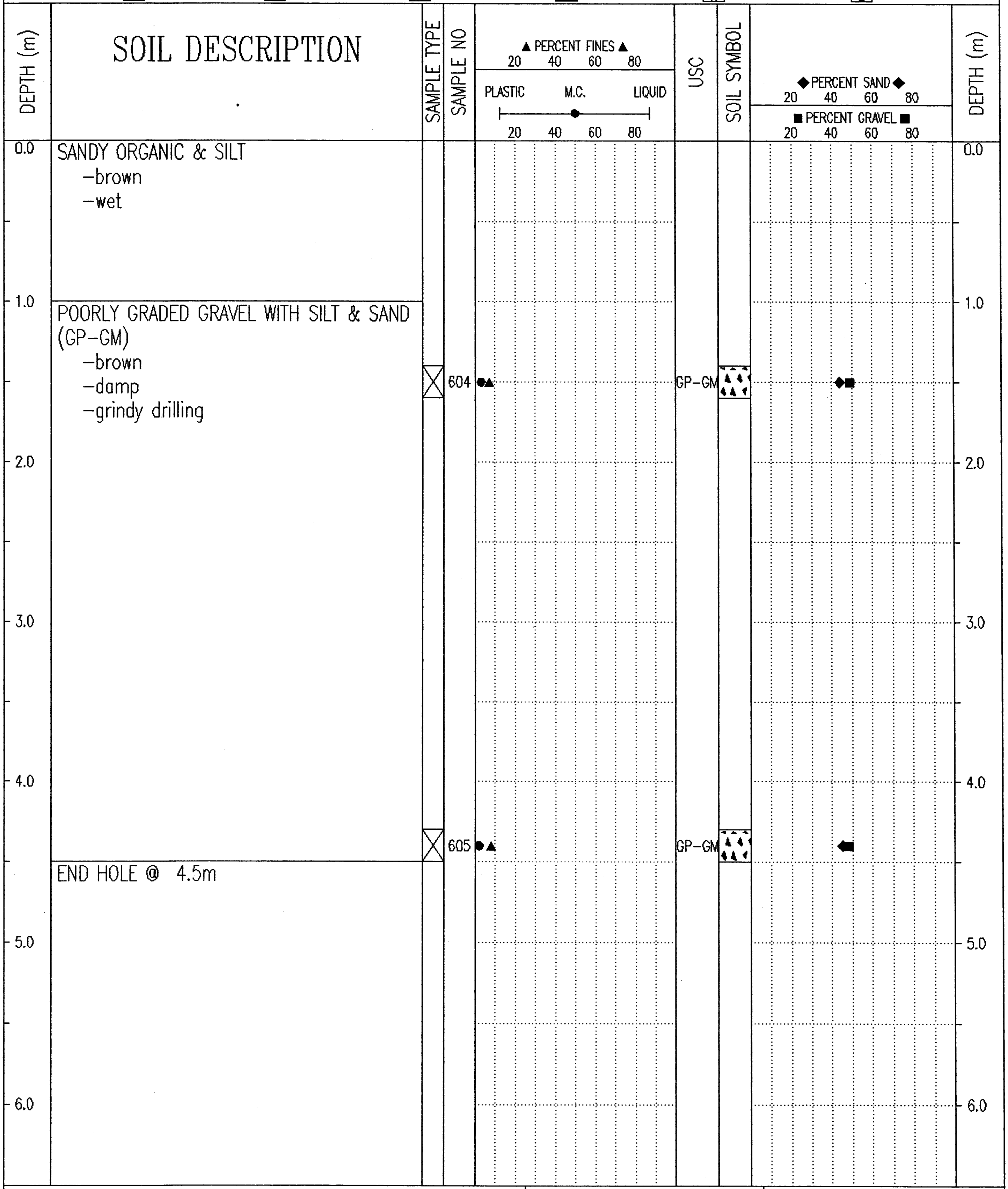
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 612-347
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1734+303 BK; 1738+441 AH C.L.	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◸ S.P.T. ☒ AUGER ☰ BULK ▯▯ TUBE ▮ CORE



SOIL DESCRIPTION

SANDY ORGANIC & SILT
- –brown
- –wet

POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)
- –brown
- –damp
- –grindy drilling

END HOLE @ 4.5m

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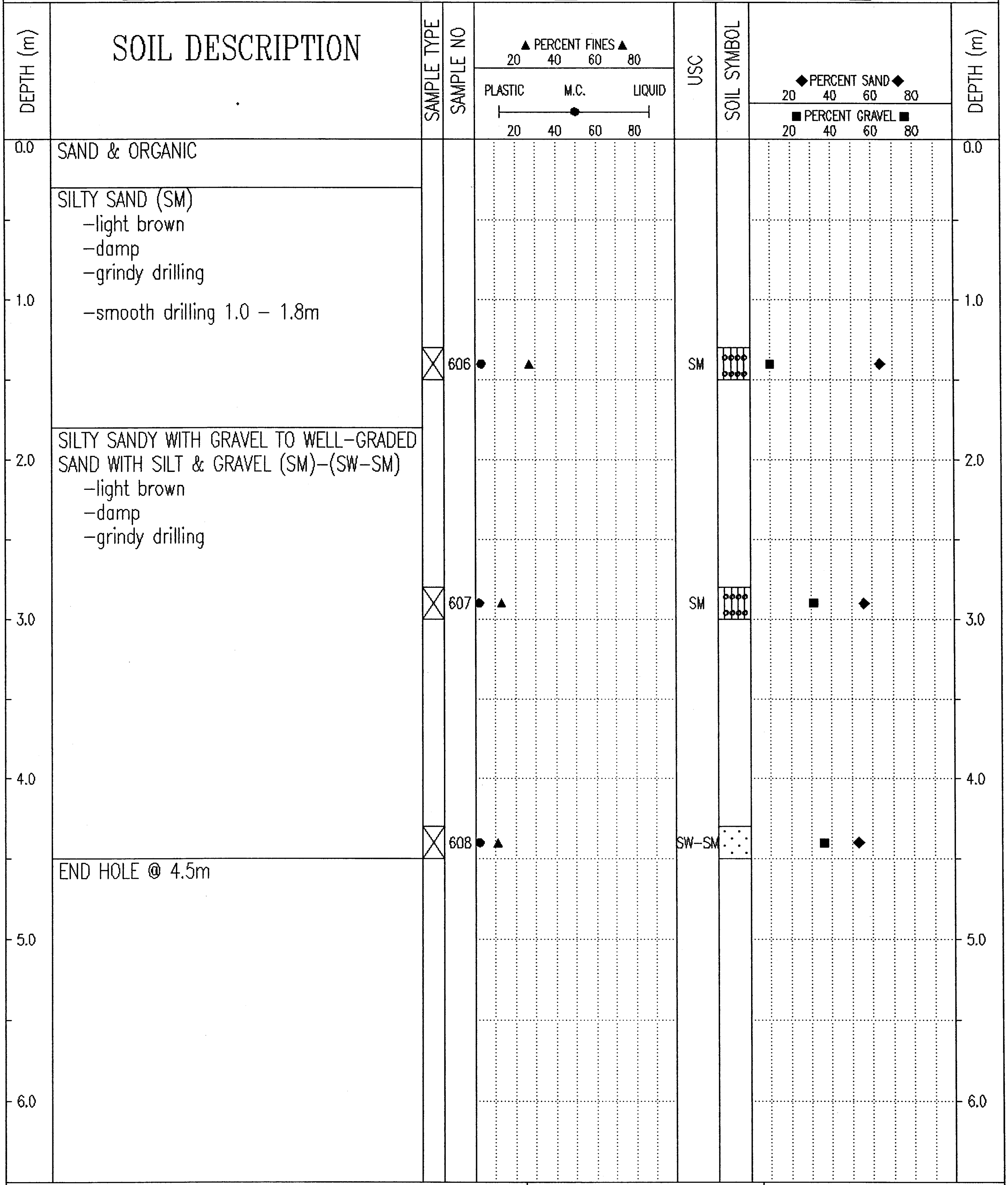
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 612-348
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1734+306 BK; 1738+444 AH 40m LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▯ CORE



SAND & ORGANIC

SILTY SAND (SM)
- light brown
- damp
- grindy drilling
- smooth drilling 1.0 – 1.8m

SILTY SANDY WITH GRAVEL TO WELL-GRADED SAND WITH SILT & GRAVEL (SM)-(SW-SM)
- light brown
- damp
- grindy drilling

END HOLE @ 4.5m

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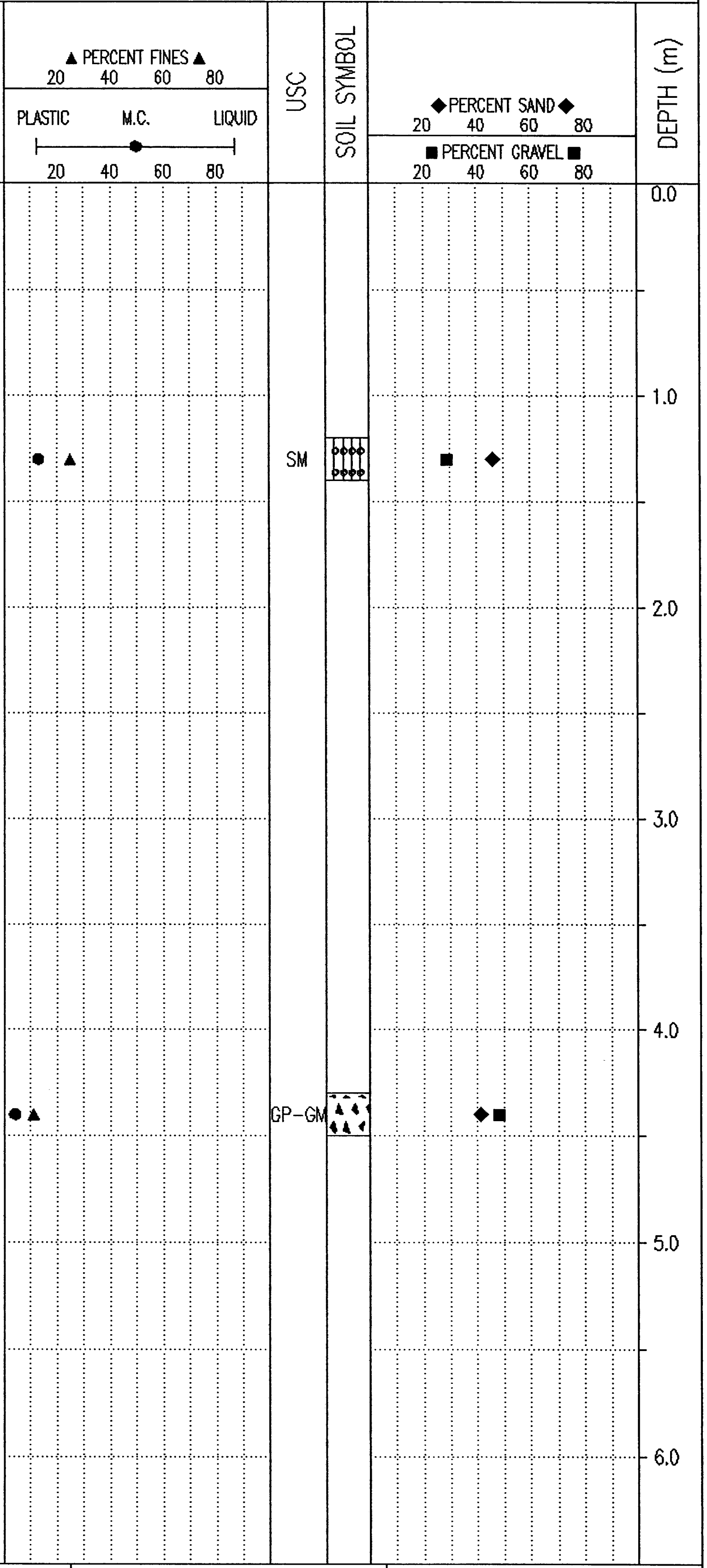
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 612-346
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1734+400 BK; 1738+538 AH 11m LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◸ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO
0.0	ORGANIC & SILT -brown -moist		
0.6	SILTY SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SILTY & SAND (SM)-(GP-GM) -brown - orange -oxidized -grindy drilling		
1.3		☒	602
3.5	-no oxidation below 3.5m		
4.4		☒	603
4.5	END HOLE @ 4.5m		



Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/08/06
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SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 612–345
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092–202101–0361
B40–L DRILL 6"AUGERS	LOCATION:1734+598 BK; 1738+736 AH 14m LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	GRAVELLY SAND –brown –moist							0.0
	POORLY GRADED GRAVEL WITH SILT & SAND (GP–GM) –grey –damp –grindy drilling							
1.0								1.0
		☒	601	●▲	GP–GM		◆ ■	
2.0								2.0
	SILT AND ORGANIC –brown – black –saturated –smooth drilling							
3.0▼	GRANULAR MATERIAL SUSPECTED –sample washed off auger –H20 level @ 3.0m –some grindy drilling							3.0▼
4.0								4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/08/06
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SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 612-344
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1734+661 BK; 1738+799 AH 69m LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

SOIL DESCRIPTION

DEPTH (m)

0.0 ▼

POORLY GRADED GRAVEL WITH SAND (GP)
- brown
- water level @ .2m
- saturated to free water
- easy grindy drilling
- no large rocks encountered

1.0

2.0

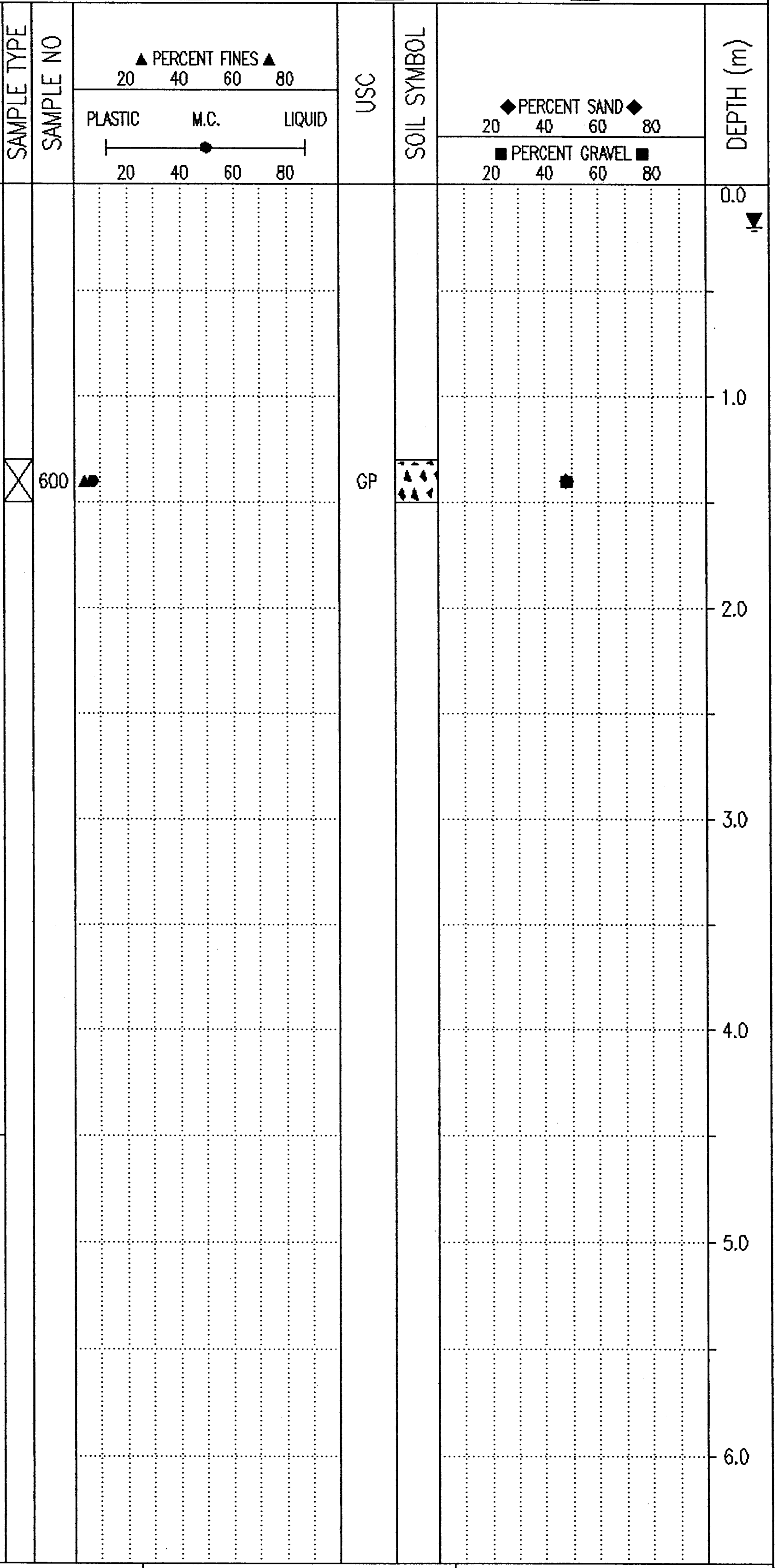
3.0

4.0

END HOLE @ 4.5m
Note: Testhole in Bock's Creek Bed

5.0

6.0



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REVIEWED BY:	COMPLETE: 01/08/06
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Government of Yukon
Transportation Engineering

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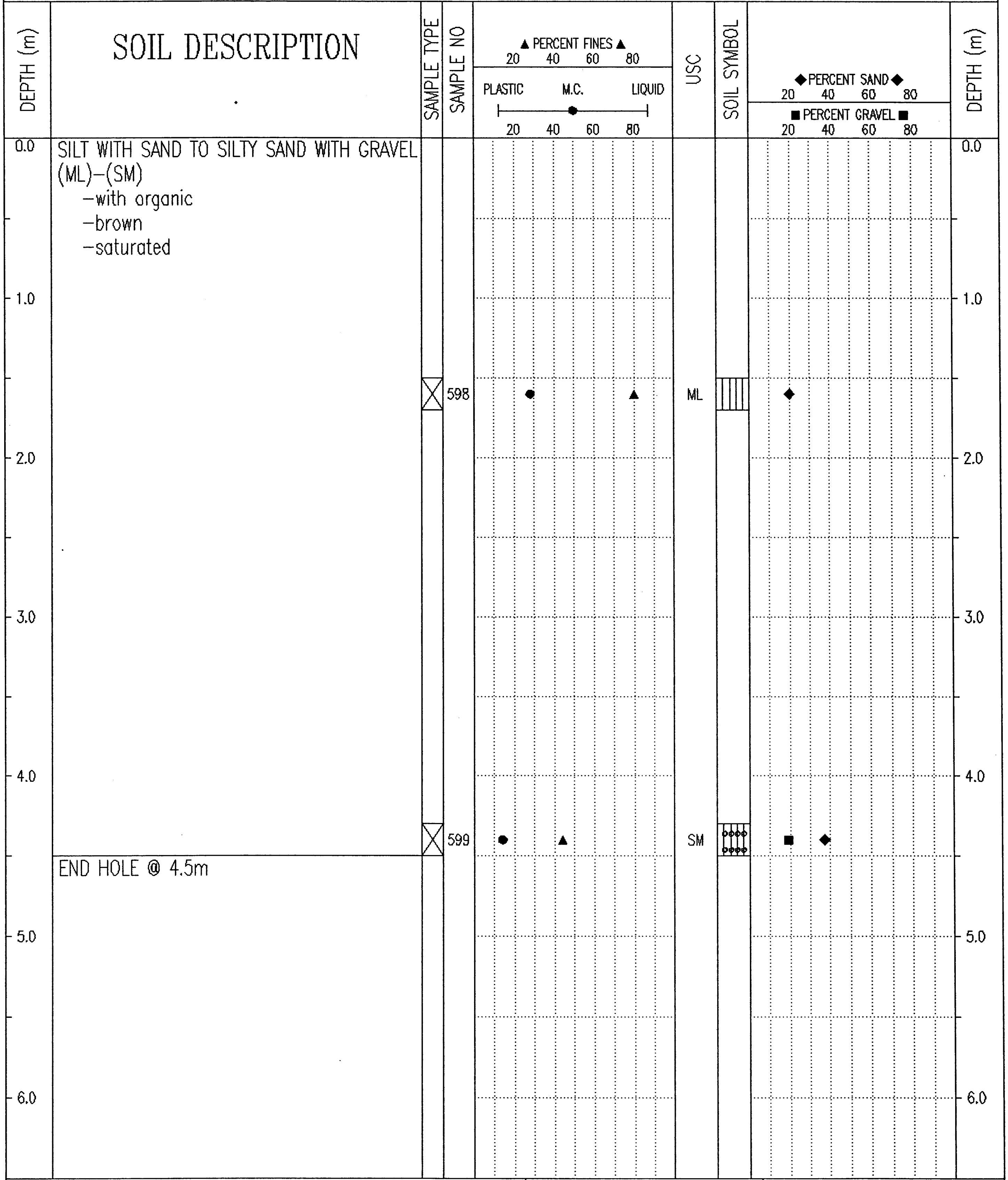
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 612-343
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1734+776 Bk; 1738+914 AH 32m Lt	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SILT WITH SAND TO SILTY SAND WITH GRAVEL (ML)-(SM)
- -with organic
- -brown
- -saturated

END HOLE @ 4.5m

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/08/03
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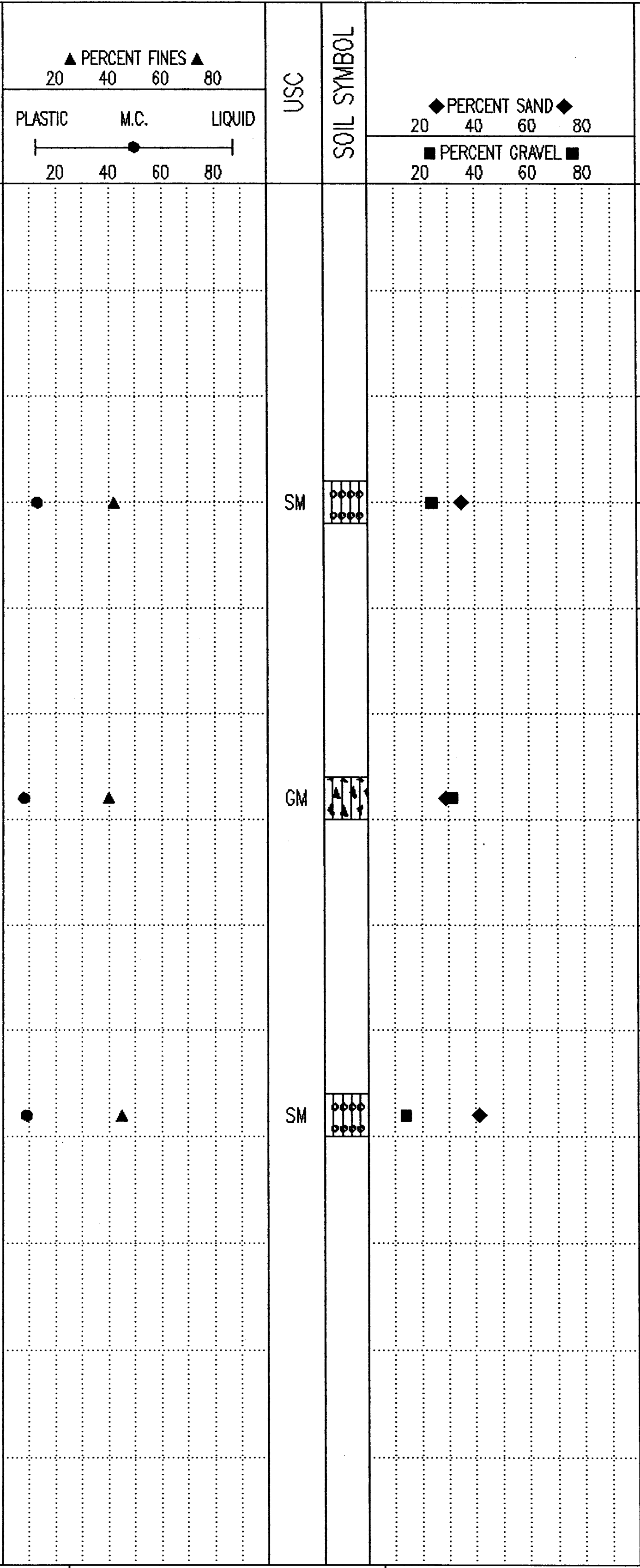
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 612-342
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1739+007 23.6M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC			
	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND TO SILTY SAND (SM)-(GM)-(SM) -brown -frozen (Nb) below .5m			
1.0	-grindy drilling below 1.2m			
		☒	595	SM
2.0				
		☒	596	GM
3.0				
4.0	-frozen (Nf) below 4.0m			
		☒	597	SM
	END HOLE @ 4.5m			
5.0				
6.0				



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	REVIEWED BY:	COMPLETE: 01/08/03
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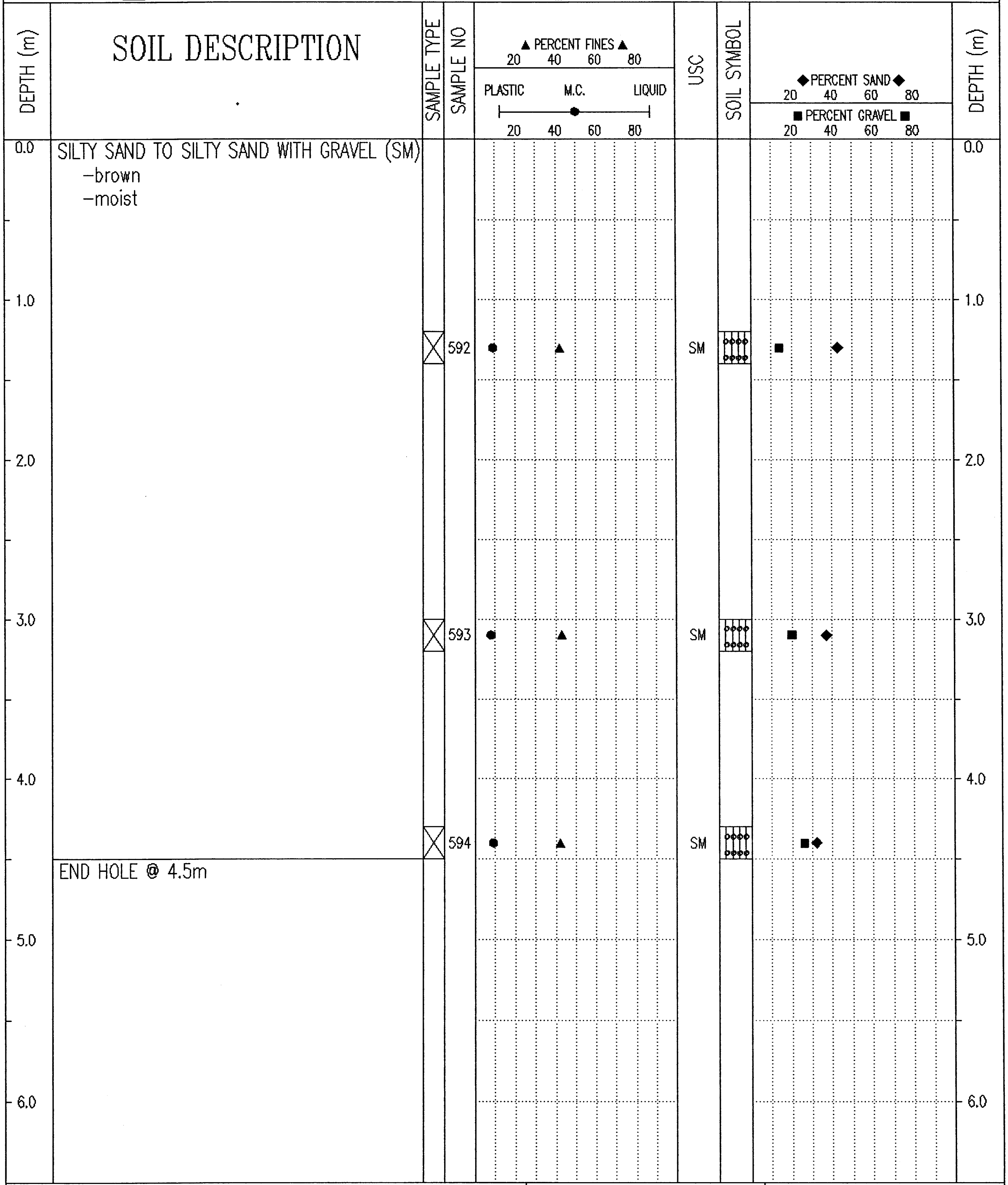
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 612-341
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1739+104 11M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ▮ CORE



DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	SILTY SAND TO SILTY SAND WITH GRAVEL (SM) -brown -moist			
		☒	592	SM
		☒	593	SM
		☒	594	SM
	END HOLE @ 4.5m			

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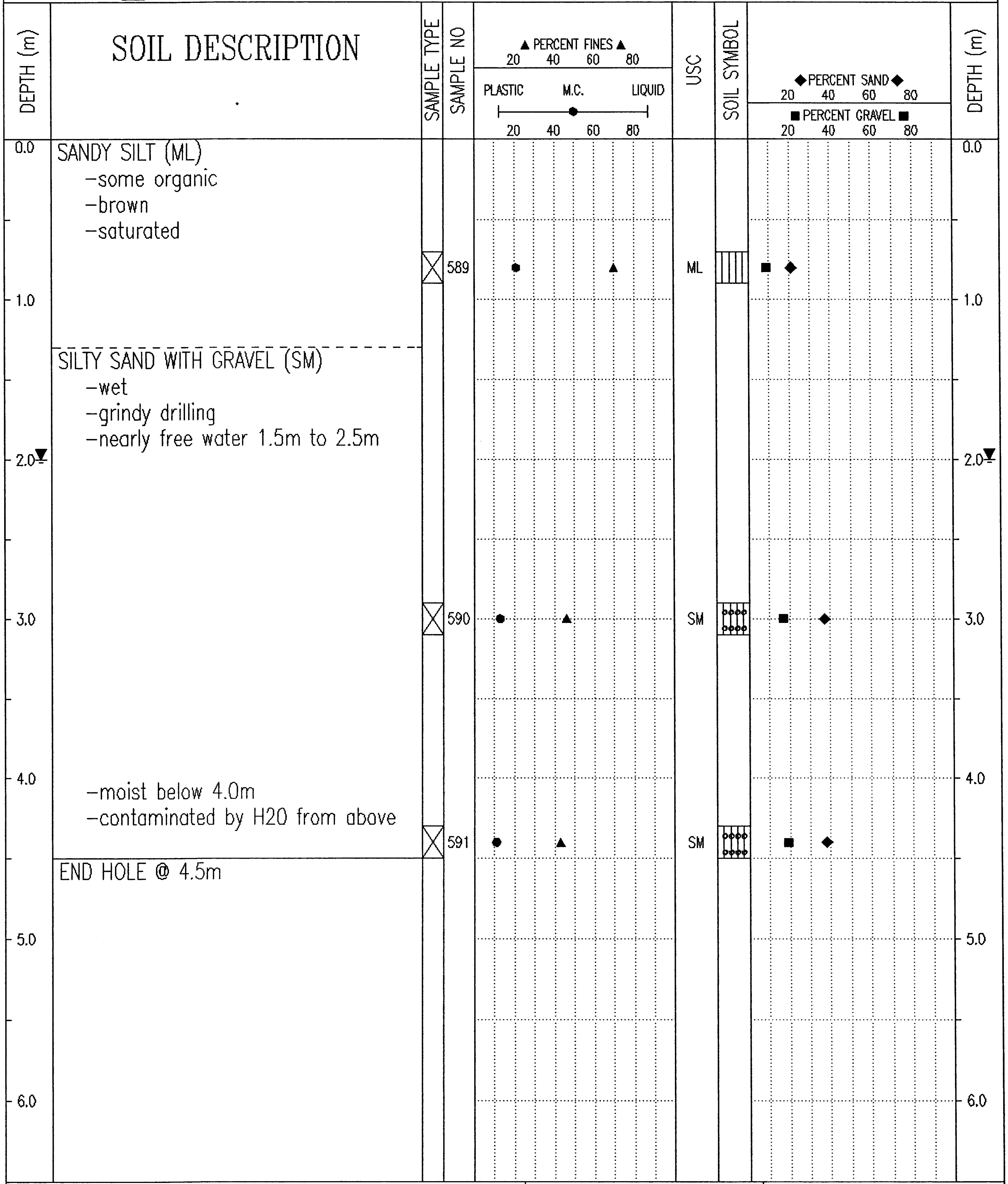
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 612-340
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1739+220 12.6m Lt	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▐ CORE



SANDY SILT (ML)
- some organic
- brown
- saturated

SILTY SAND WITH GRAVEL (SM)
- wet
- grindy drilling
- nearly free water 1.5m to 2.5m

- moist below 4.0m
- contaminated by H20 from above

END HOLE @ 4.5m

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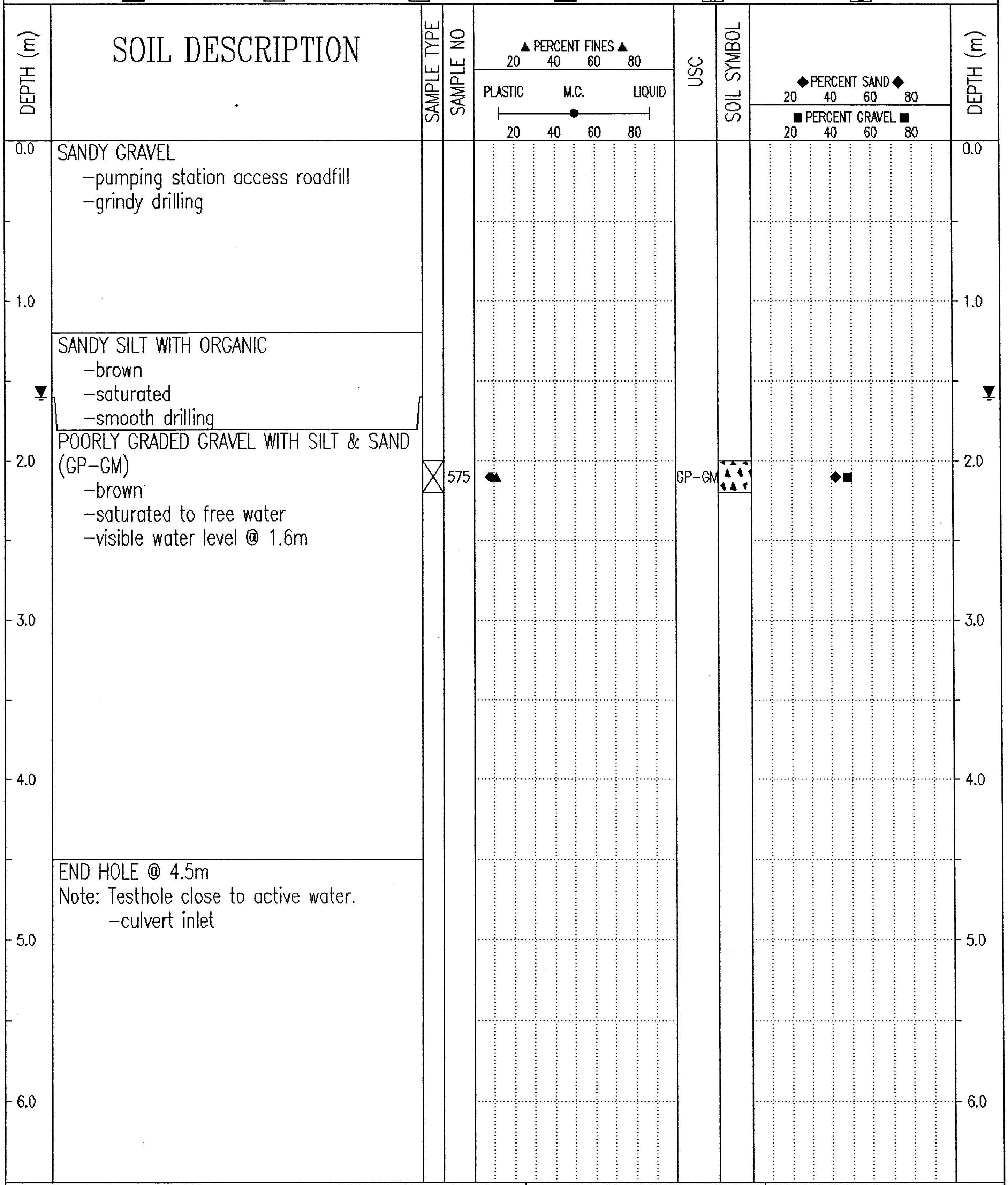
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 612-333
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1739+331 17.8M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▌ CORE



SOIL DESCRIPTION

SANDY GRAVEL
- pumping station access roadfill
- grindy drilling

SANDY SILT WITH ORGANIC
- brown
- saturated
- smooth drilling

POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)
- brown
- saturated to free water
- visible water level @ 1.6m

END HOLE @ 4.5m

Note: Testhole close to active water.
- culvert inlet

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SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 612-334
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1739+335 12.3M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◸ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	No samples recovered -material washed away -grindy drilling -visible water level @ 0.5m							0.0
▼								▼
1.0								1.0
2.0								2.0
3.0								3.0
4.0	-small trace of silt visible on auger flights below 3.7m -smooth drilling below 3.7m							4.0
	END HOLE @ 4.5m Note: Testhole close to active stream. Culvert outlet							
5.0								5.0
6.0								6.0

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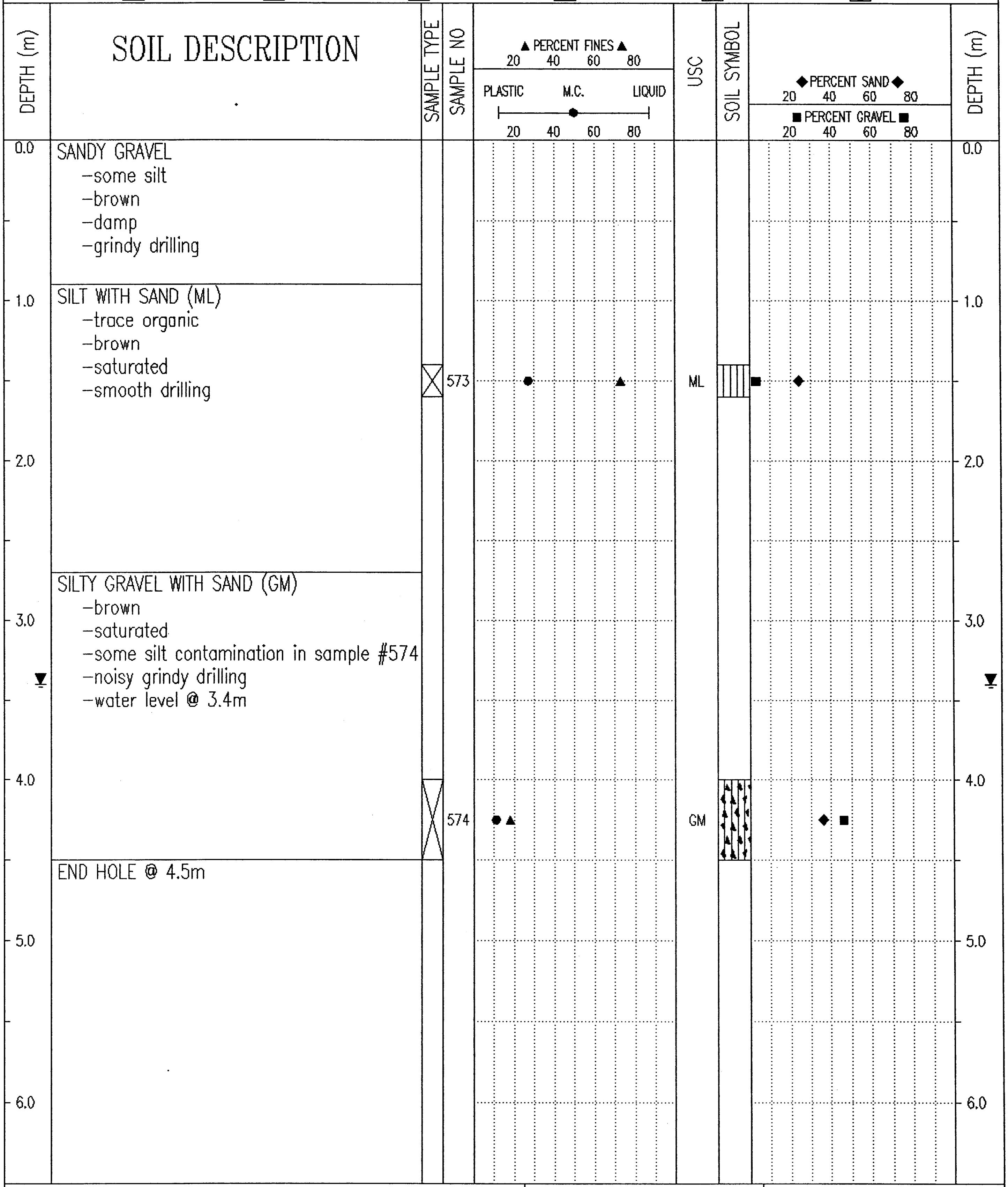
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-332
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1739+428 4M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ◫ CORE



0.0 SANDY GRAVEL
- some silt
- brown
- damp
- grindy drilling

SILT WITH SAND (ML)
- trace organic
- brown
- saturated
- smooth drilling

SILTY GRAVEL WITH SAND (GM)
- brown
- saturated
- some silt contamination in sample #574
- noisy grindy drilling
- water level @ 3.4m

END HOLE @ 4.5m

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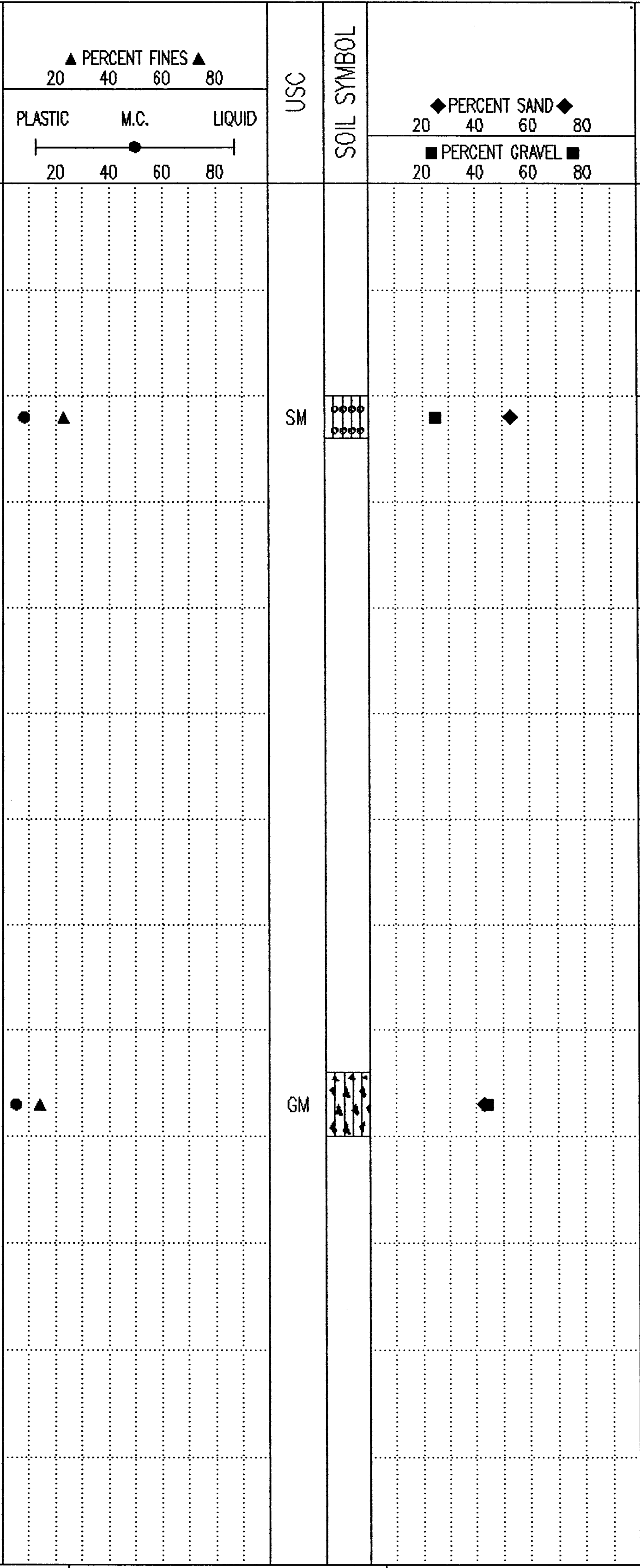
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611–330
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092–202101–0361
B40–L DRILL 6"AUGERS	LOCATION:1739+556 13M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC			
0.6	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)–(GM) –brown –moist –maximum 50mm material augered up –grindy drilling			
1.0		☒	569	SM
4.3		☒	570	GM
4.5	END HOLE @ 4.5m			



Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.5 m
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SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-331
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1739+559 20.1M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC -brown -wet							0.0
	WELL-GRADED SAND WITH SILT & GRAVEL TO WELL-GRADED GRAVEL WITH SILT & SAND (SW-SM)-(GW-GM) -brown -damp -grindy drilling							
1.0								1.0
		☒	571	●▲	SW-SM		◆■	
2.0								2.0
3.0								3.0
4.0								4.0
		☒	572	●▲	GW-GM		◆■	
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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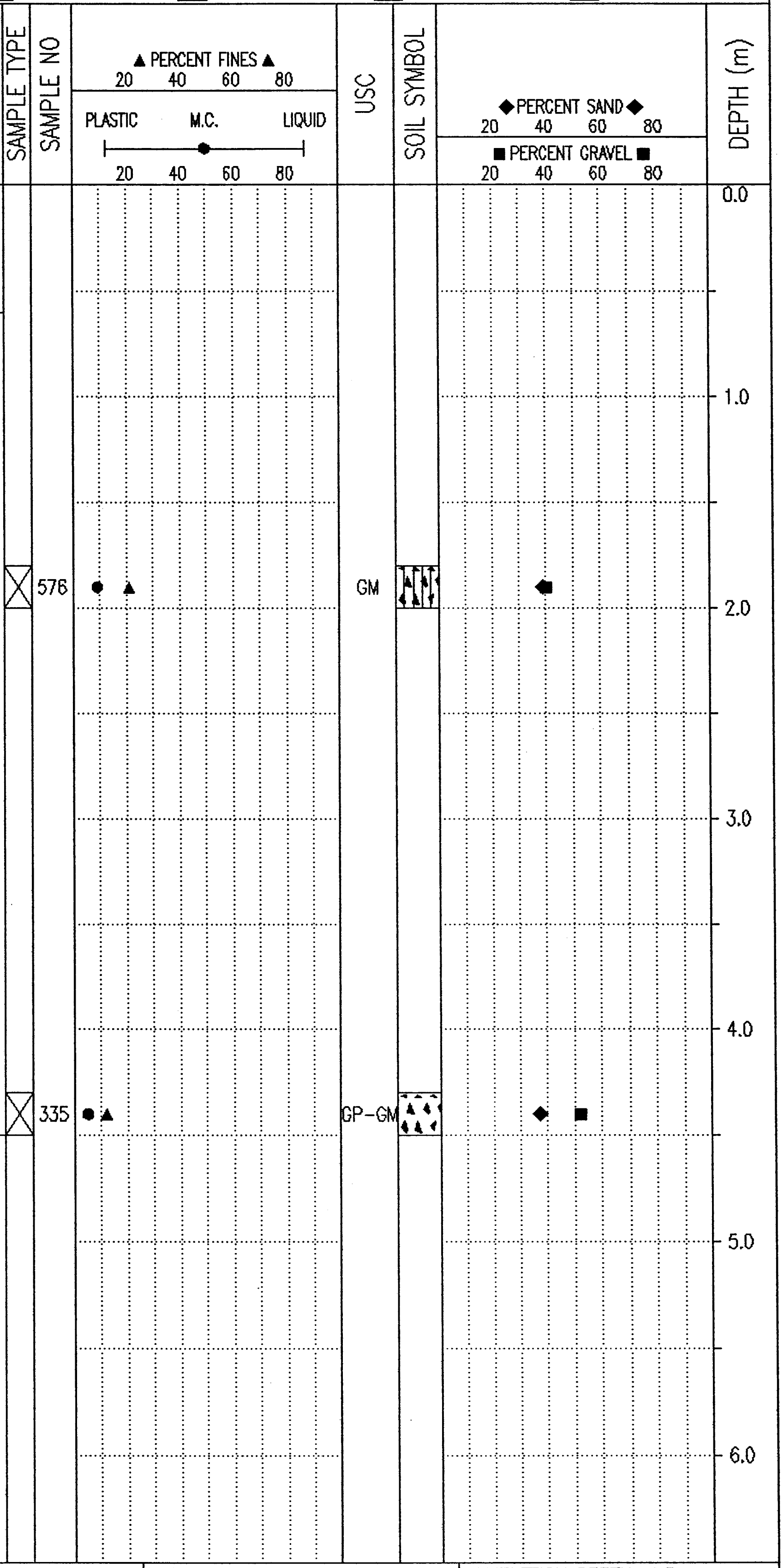
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 612–335
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092–202101–0361
B40–L DRILL 6"AUGERS	LOCATION:1739+567 15.8M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	ORGANIC
	SILTY GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GM)–(GP–GM) –brown –moist –maximum 75mm material augered up –grindy drilling
1.0	
2.0	
3.0	
4.0	
	END HOLE @ 4.5m
5.0	
6.0	



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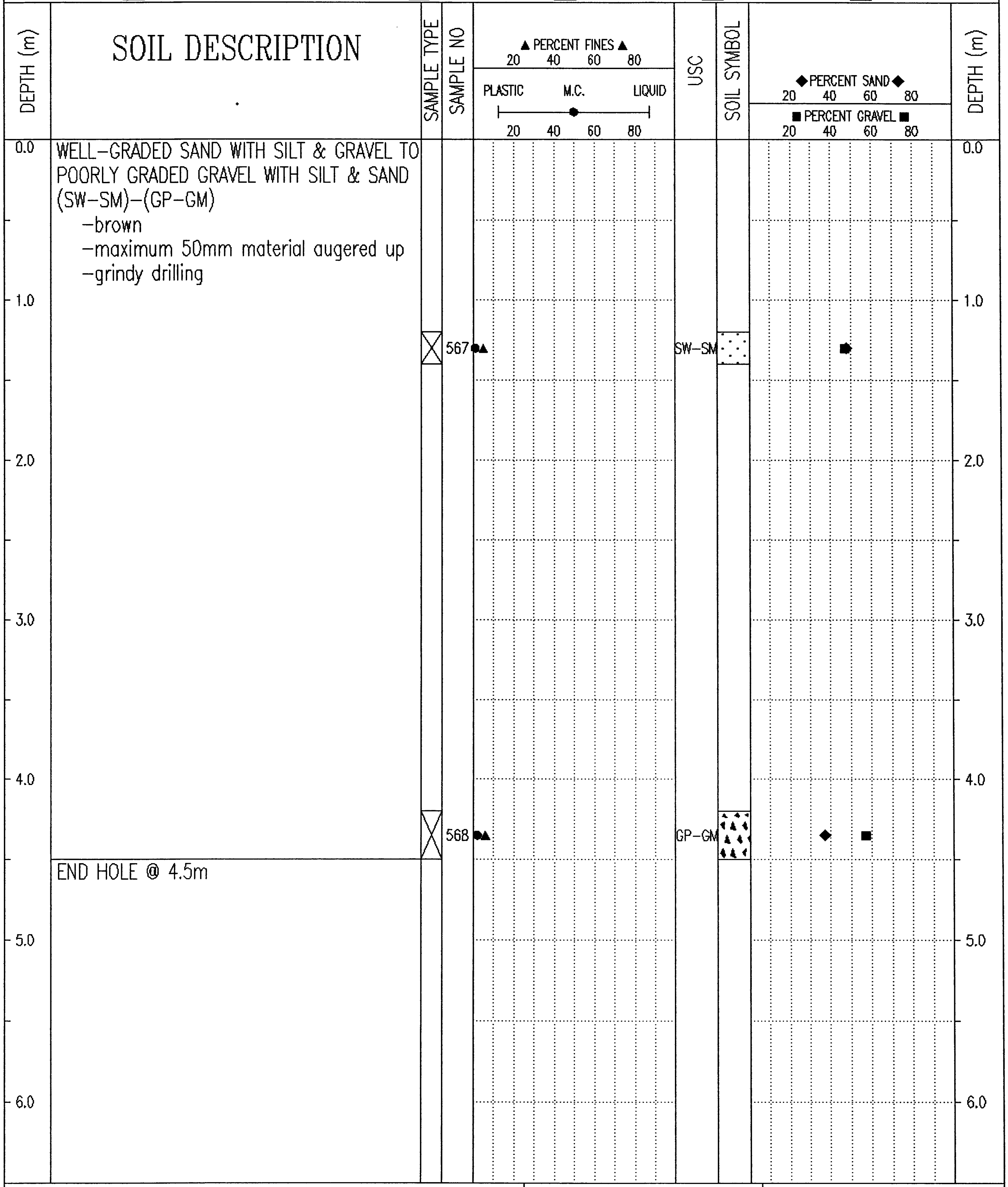
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611–329
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092–202101–0361
B40–L DRILL 6"AUGERS	LOCATION:1739+700 11.2 M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



WELL–GRADED SAND WITH SILT & GRAVEL TO POORLY GRADED GRAVEL WITH SILT & SAND (SW–SM)–(GP–GM)

- –brown
- –maximum 50mm material augered up
- –grindy drilling

END HOLE @ 4.5m

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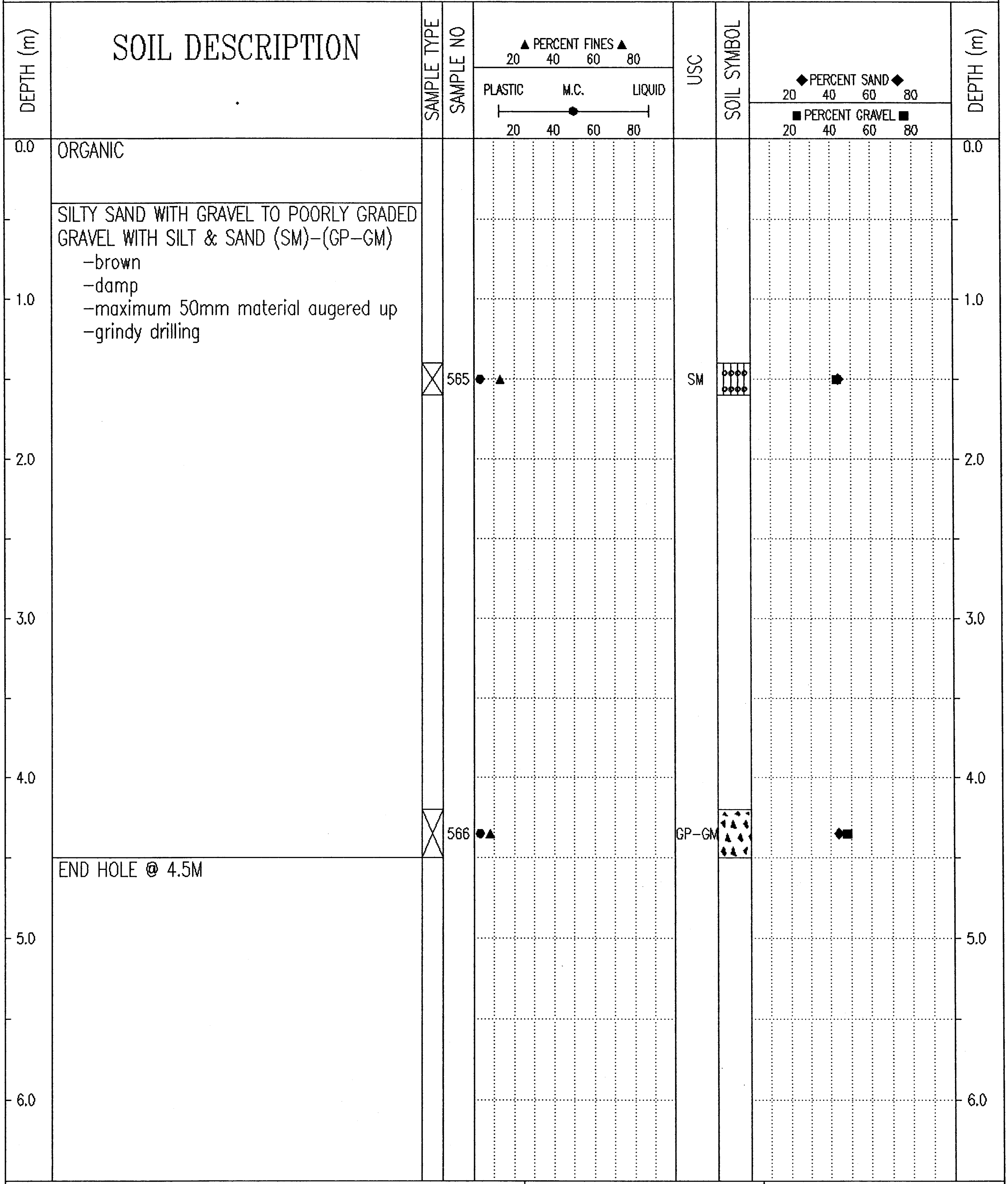
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-328
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1739+821 19.2M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



ORGANIC

SILTY SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SILT & SAND (SM)-(GP-GM)
- -brown
- -damp
- -maximum 50mm material augered up
- -grindy drilling

END HOLE @ 4.5M

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SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-327
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1739+822 7.6M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown -damp -maximum 50mm material augered up			
1.0		☒	563	GP-GM
2.0				
3.0	-moist below 3.5m			
4.0		☒	564	GP-GM
4.5	END HOLE @ 4.5m			
5.0				
6.0				

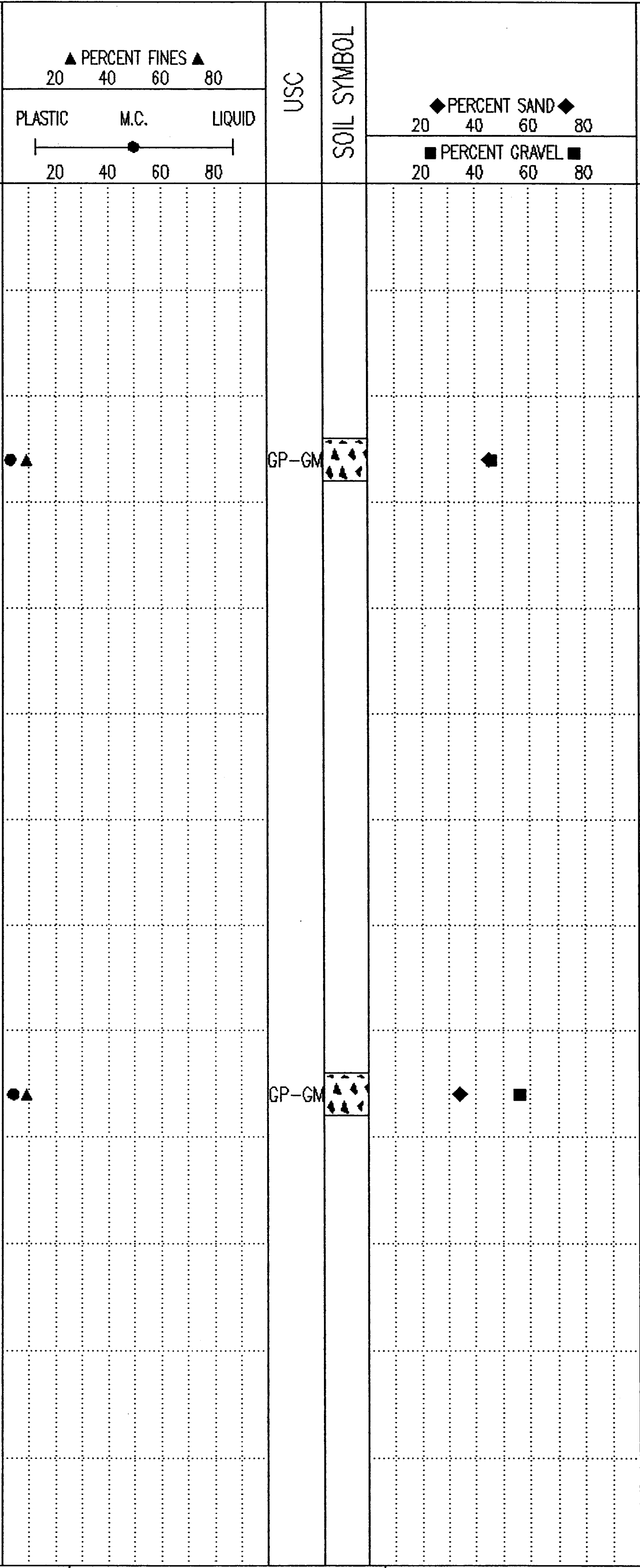

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Fig. No:
COMPLETION DEPTH: 4.5 m
COMPLETE: 01/08/02
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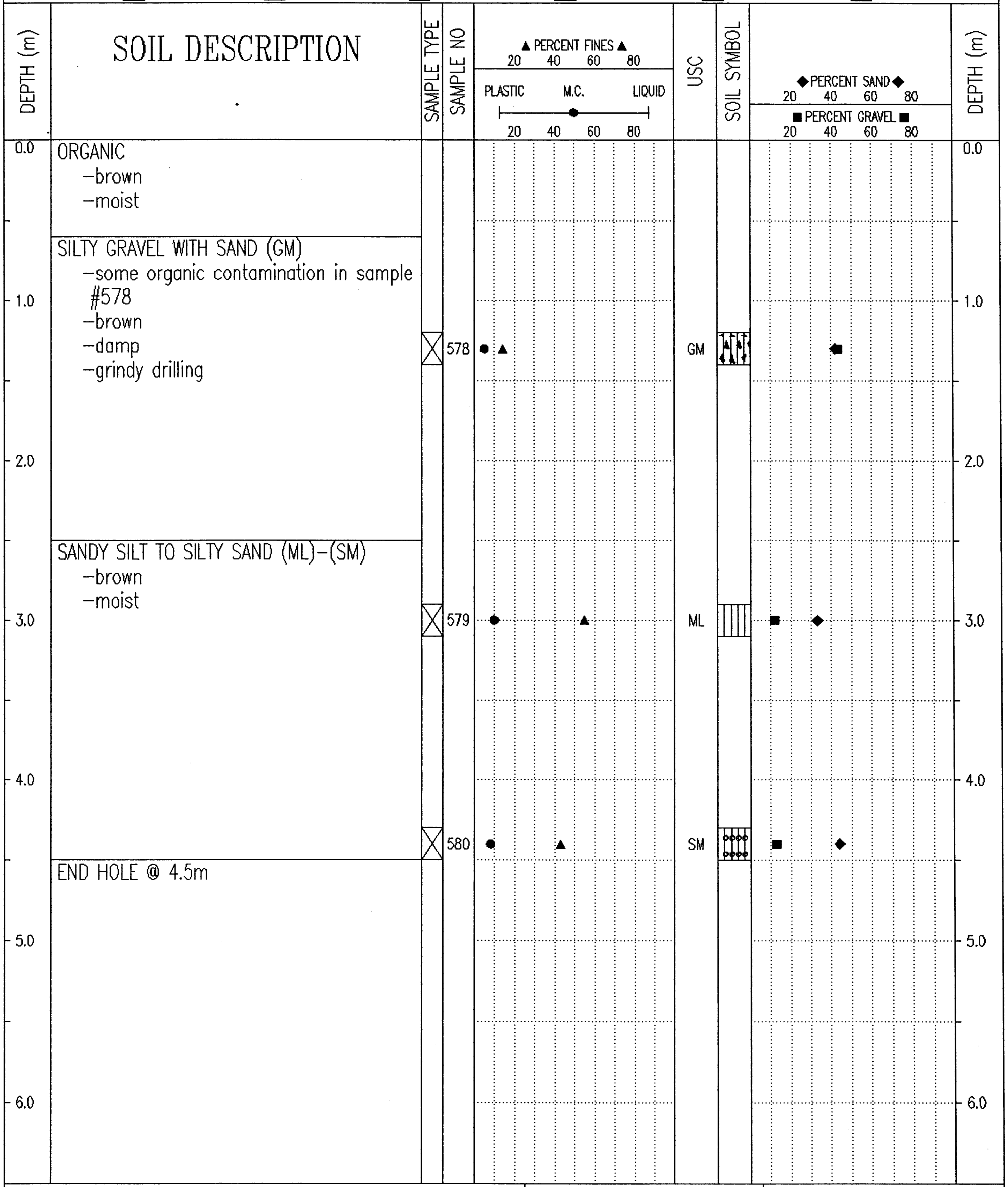
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 612-336
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1739+823 11.2M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC -brown -moist			
	SILTY GRAVEL WITH SAND (GM) -some organic contamination in sample #578 -brown -damp -grindy drilling	☒	578	GM
	SANDY SILT TO SILTY SAND (ML)-(SM) -brown -moist	☒	579	ML
		☒	580	SM
	END HOLE @ 4.5m			

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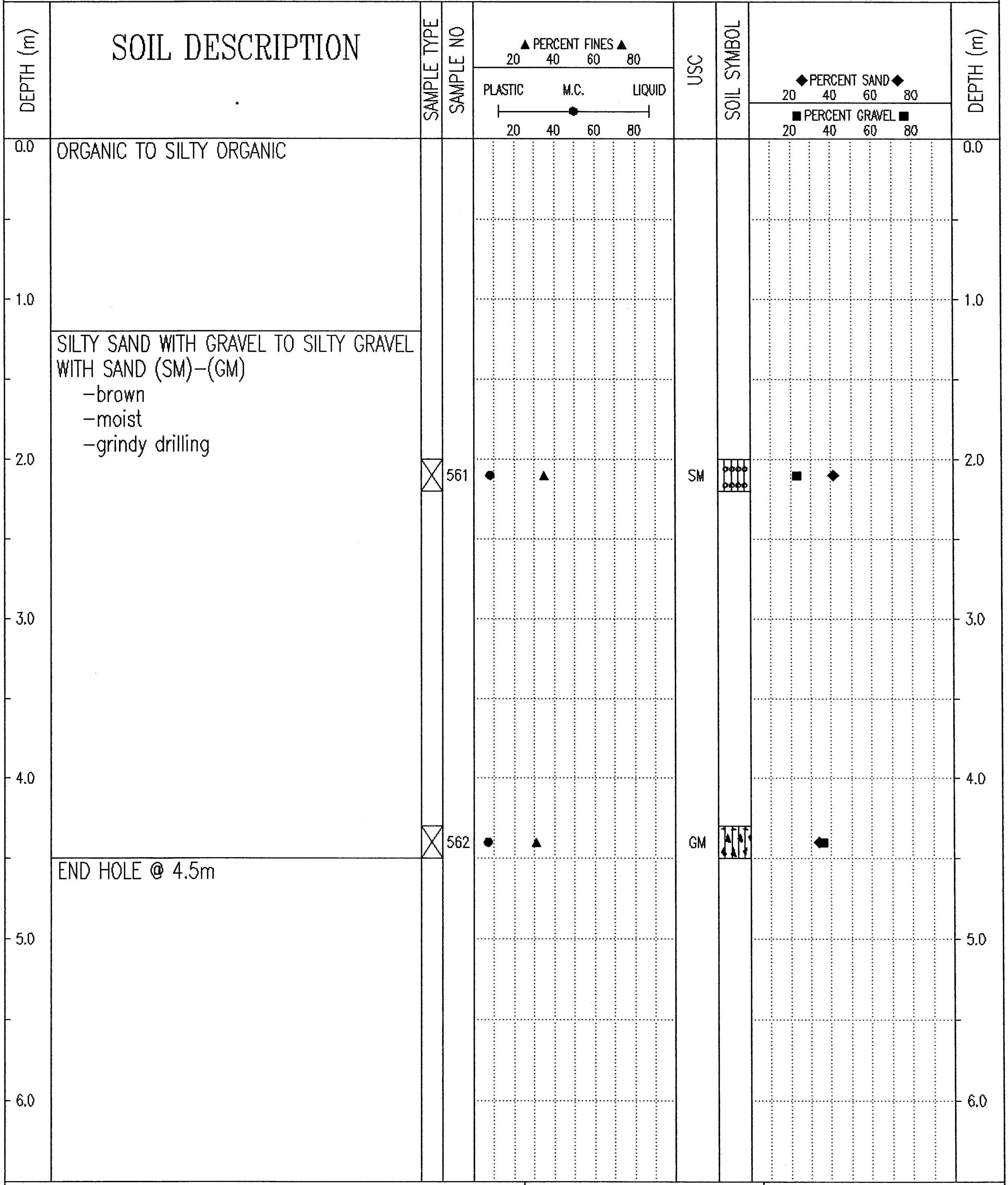
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-326
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1739+999 8M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



ORGANIC TO SILTY ORGANIC

SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM)

- -brown
- -moist
- -grindy drilling

END HOLE @ 4.5m

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	REVIEWED BY:	COMPLETE: 01/08/02
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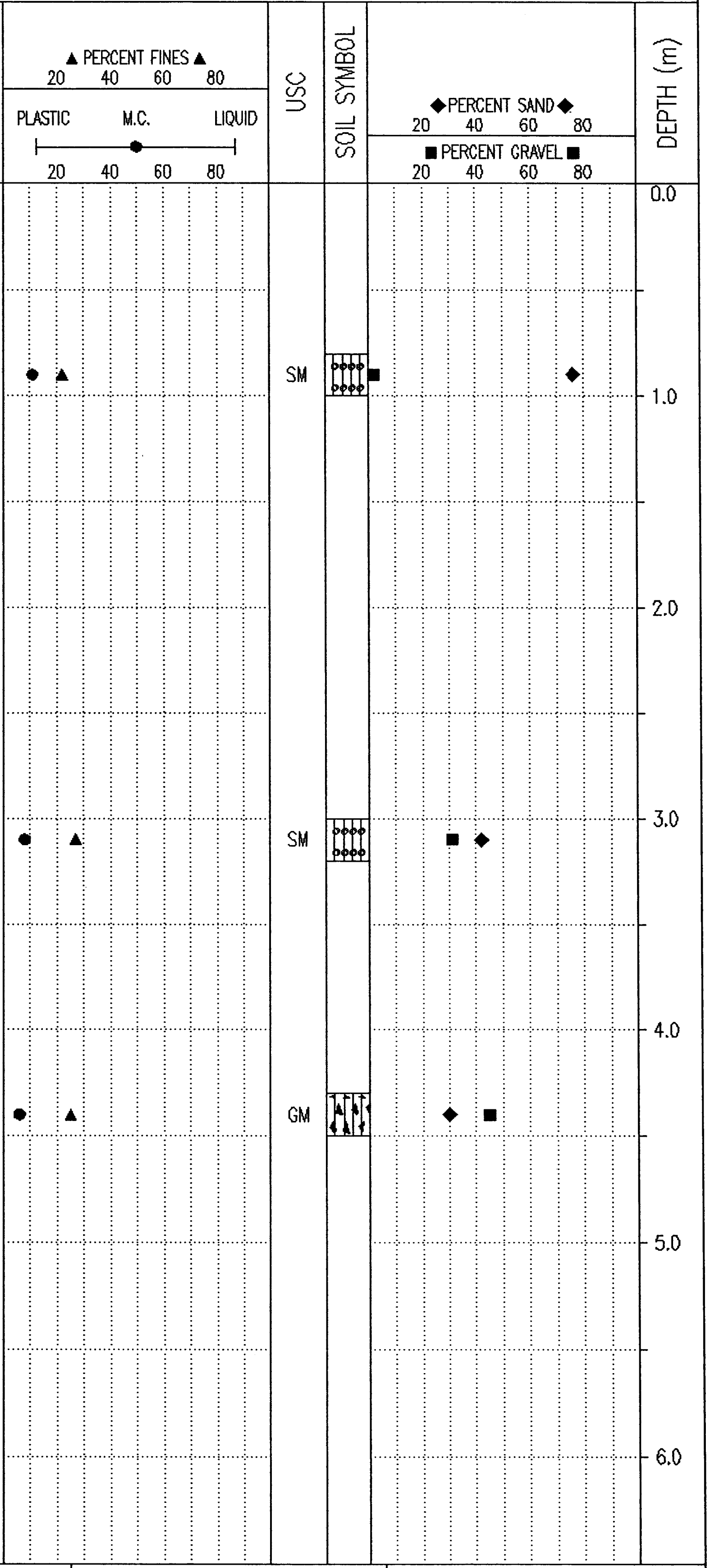
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 612-337
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1740+005 13.8M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	SILTY SAND (SM) -brown -moist			
0.9		☒	581	SM
1.3	SILT & ORGANIC -brown -wet			
2.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM) -brown -wet -grindy drilling			
3.1		☒	582	SM
4.4		☒	583	GM
4.5	END HOLE @ 4.5m			



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	REVIEWED BY:	COMPLETE: 01/08/02
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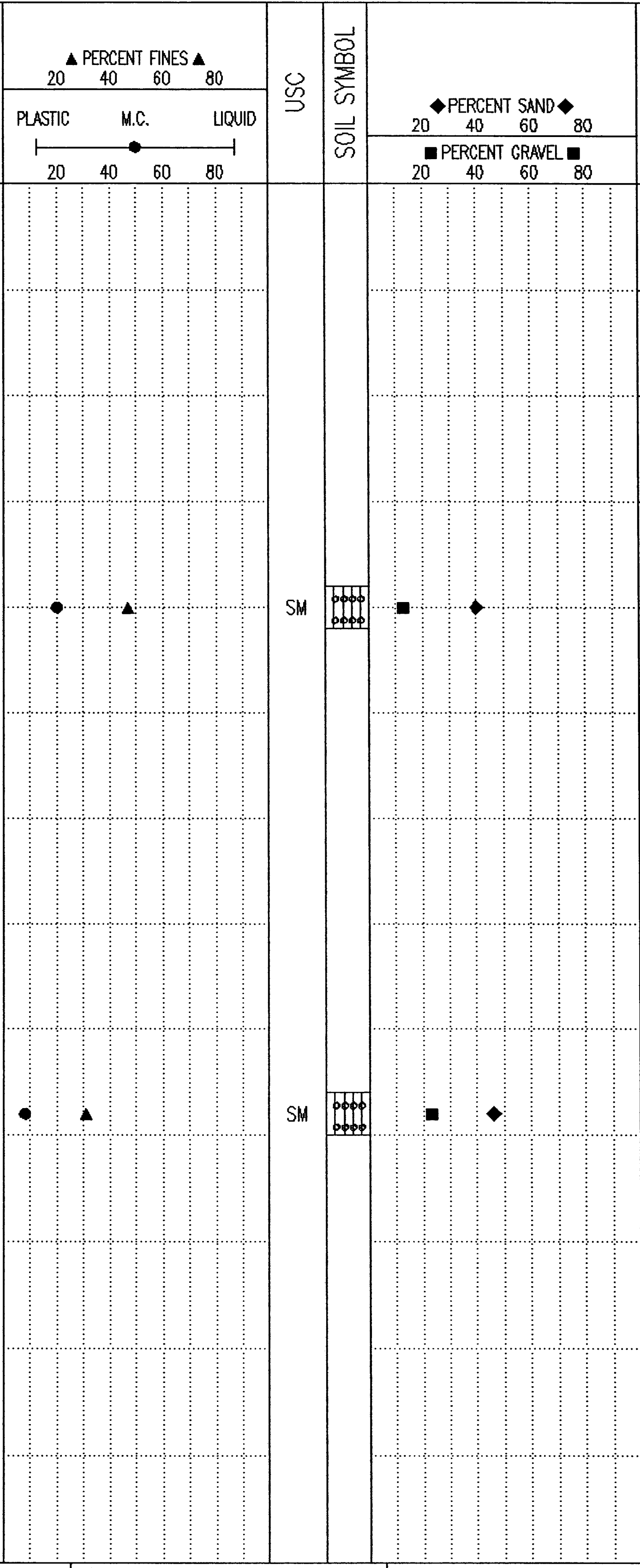
02/02/14 09:03AM

SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-325
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1740+009 30.3 LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ◧ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC	DEPTH (m)
0.0	ORGANIC -brown -saturated				0.0
1.0					1.0
	SILTY SAND TO SILTY SAND WITH GRAVEL (SM) -brown -frozen (Nb) -grindy harder drilling				
2.0		☒	559	SM	2.0
3.0					3.0
4.0	-frozen (Nf) below 4.0m				4.0
		☒	560	SM	
	END HOLE @ 4.5m				
5.0					5.0
6.0					6.0



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LOGGED BY: D.T.	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 01/08/02
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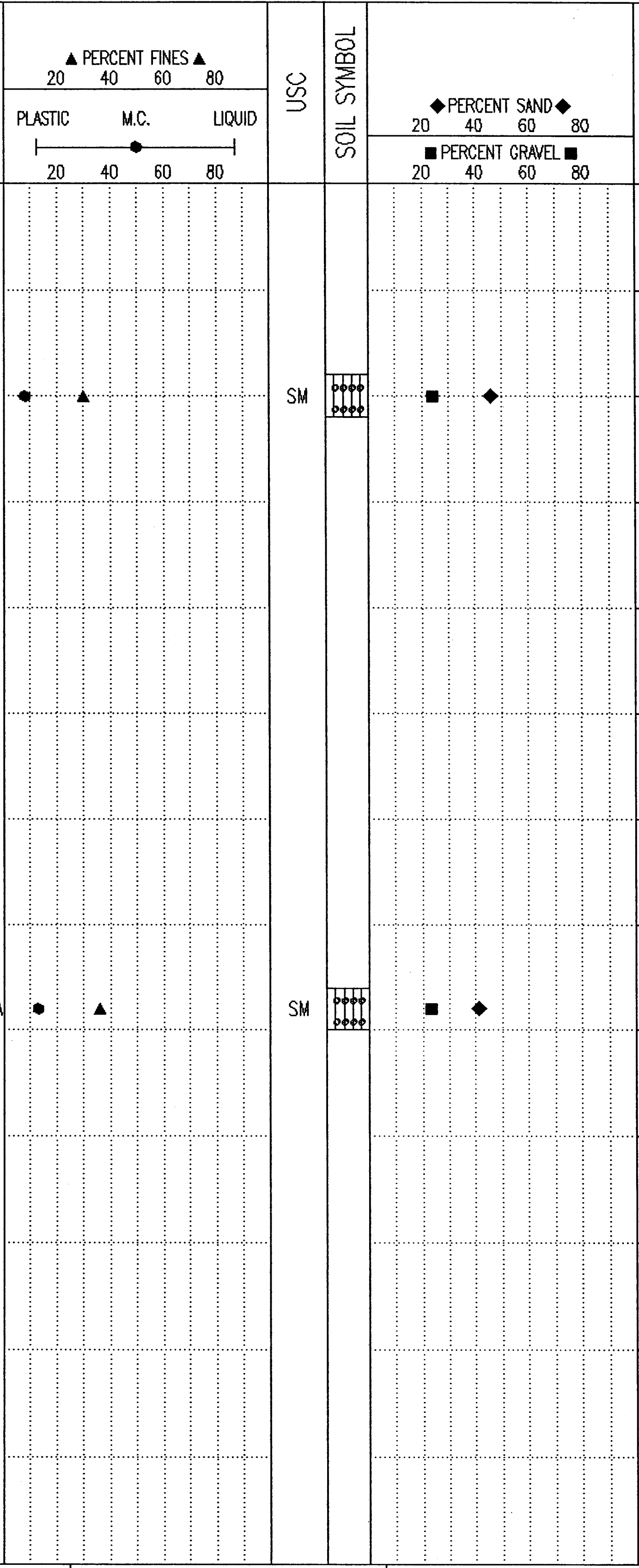
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-324
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
140-L DRILL 6"AUGERS	LOCATION:1740+128 15.9M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▯ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC			
	SILTY SAND WITH GRAVEL (SM) -brown -frozen (Vx) below 0.5m -harder material below 0.5m			
1.0		☒	558	SM
	-frozen (Nb) below 1.4m			
2.0				
3.0				
		☒	558A	SM
4.0	END HOLE @ 4.0m -refusal			
5.0				
6.0				



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LOGGED BY: D.T.	COMPLETION DEPTH: 4.0 m
REVIEWED BY:	COMPLETE: 01/08/01
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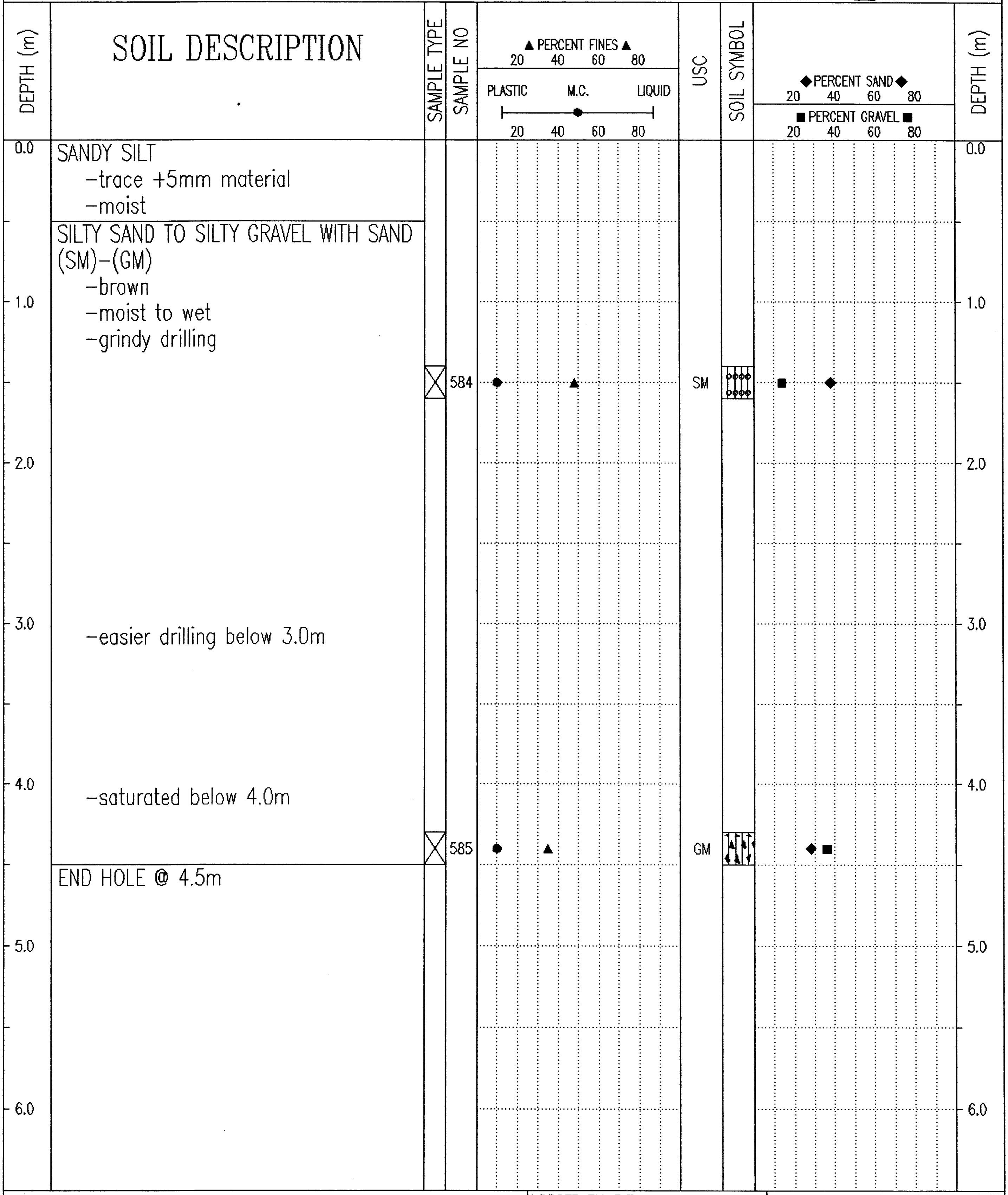
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 612-338
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1740+258 14.4M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ◨ CORE



0.0 SANDY SILT
- trace +5mm material
- moist

SILTY SAND TO SILTY GRAVEL WITH SAND (SM)-(GM)
- brown
- moist to wet
- grindy drilling
- easier drilling below 3.0m
- saturated below 4.0m

END HOLE @ 4.5m

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/08/02
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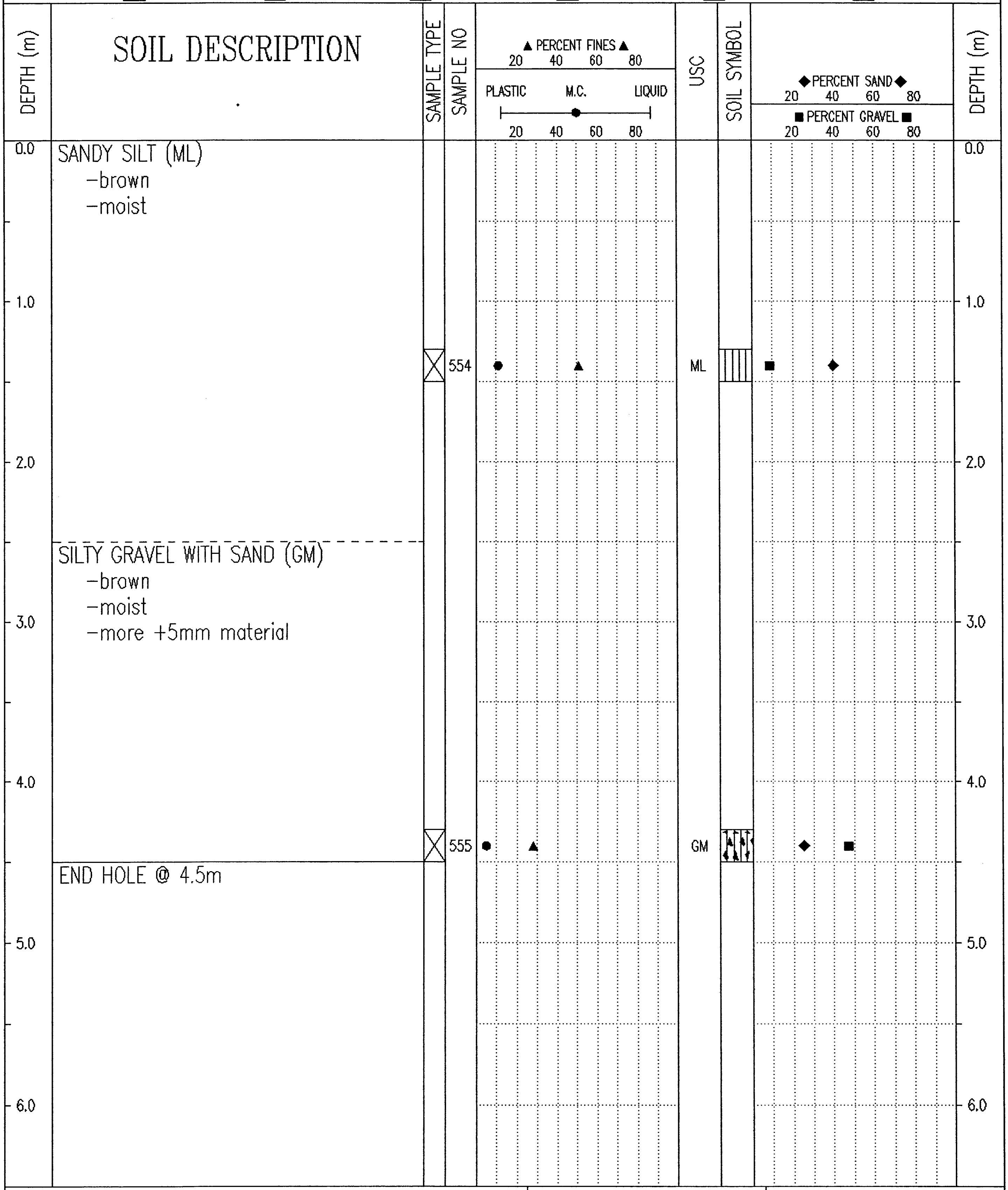
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-322
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1740+265 11.4M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SANDY SILT (ML)
-brown
-moist

554 ML

SILTY GRAVEL WITH SAND (GM)
-brown
-moist
-more +5mm material

555 GM

END HOLE @ 4.5m

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	REVIEWED BY:	COMPLETE: 01/08/01
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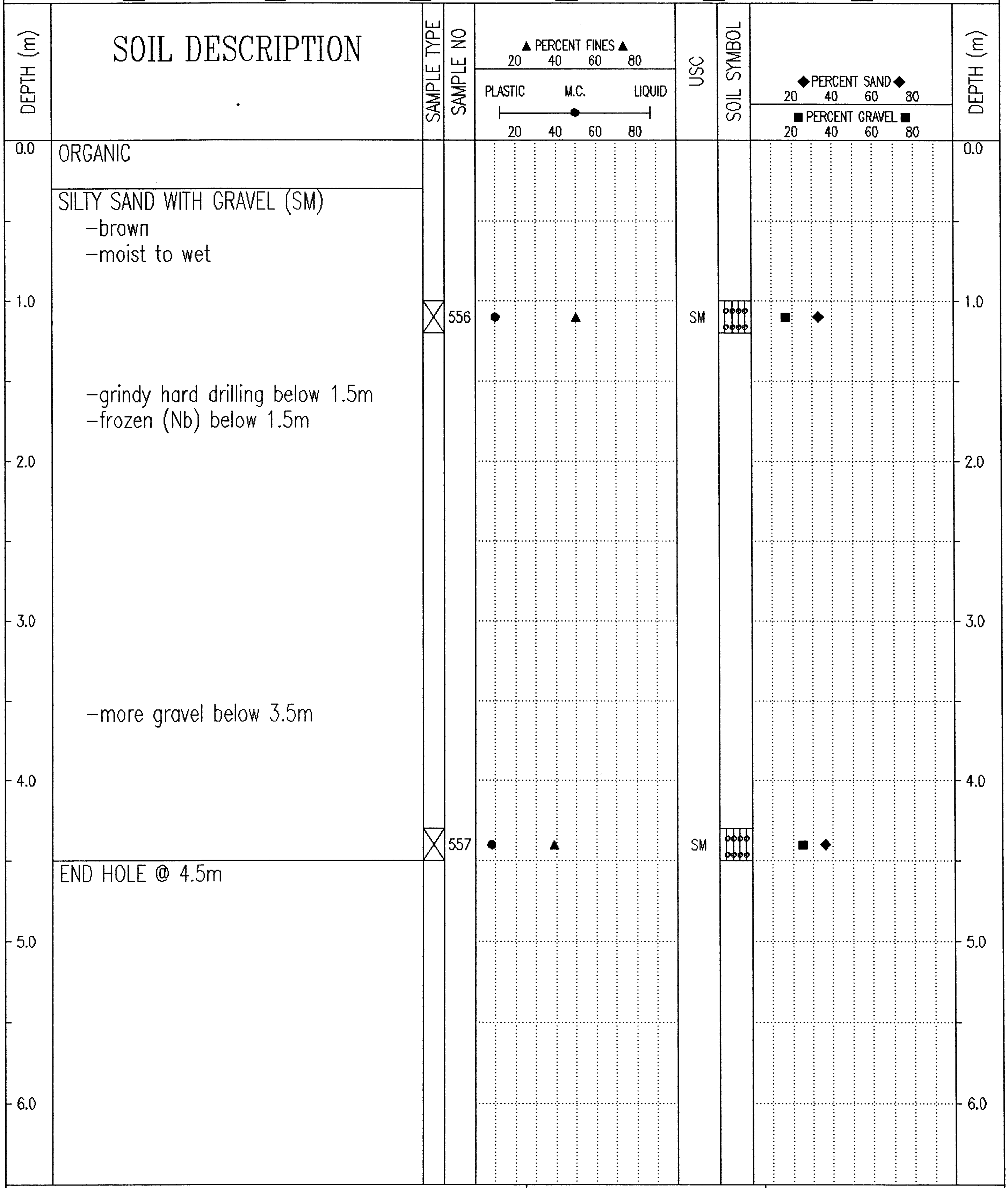
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-323
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1740+269 18.4LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



ORGANIC

SILTY SAND WITH GRAVEL (SM)
-brown
-moist to wet

-grindy hard drilling below 1.5m
-frozen (Nb) below 1.5m

-more gravel below 3.5m

END HOLE @ 4.5m

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.5 m
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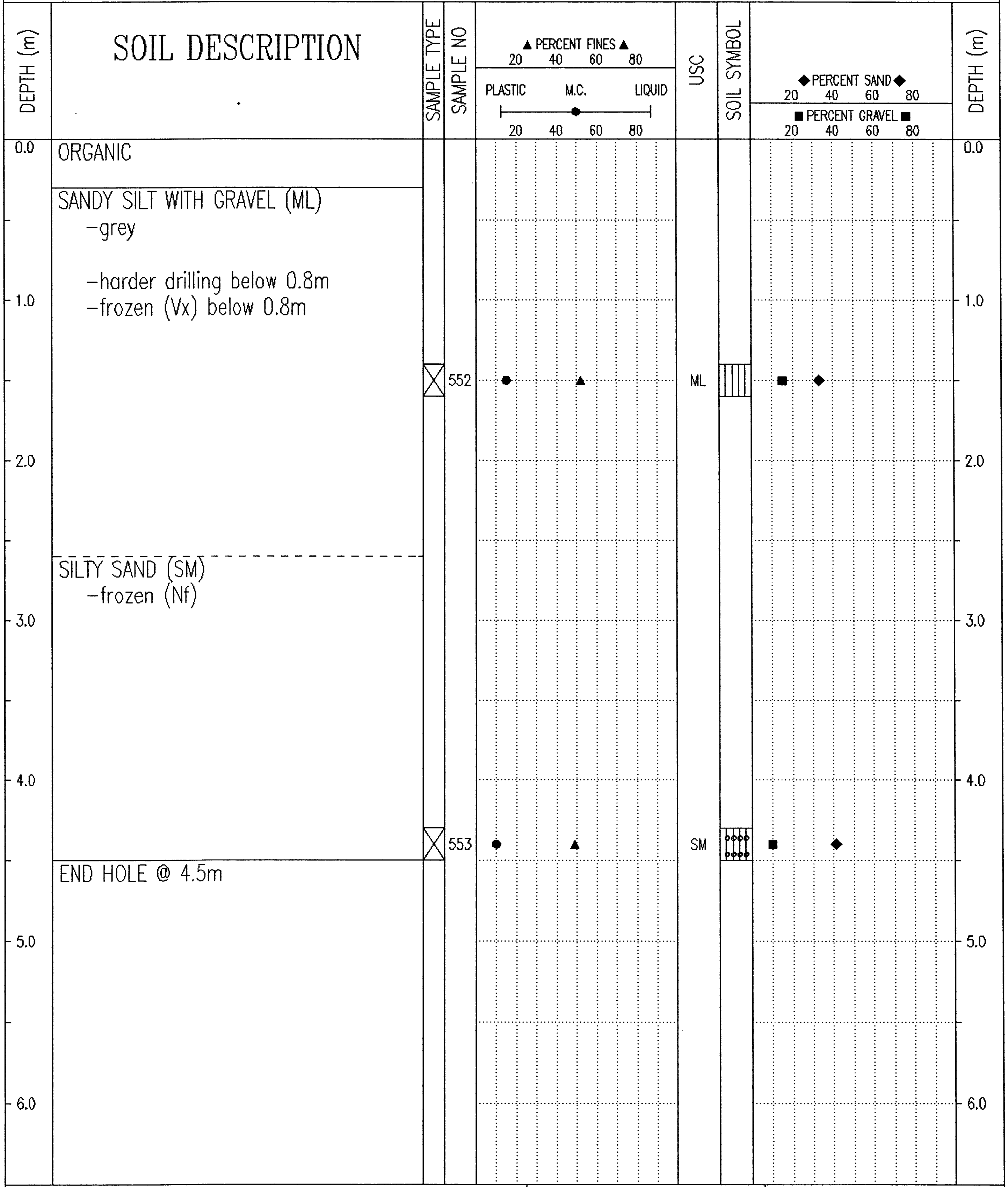
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-321
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1740+423 23.9M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



0.0	ORGANIC
	SANDY SILT WITH GRAVEL (ML) -grey -harder drilling below 0.8m -frozen (Vx) below 0.8m
	SILTY SAND (SM) -frozen (Nf)
4.5	END HOLE @ 4.5m

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	REVIEWED BY:	COMPLETE: 01/08/01
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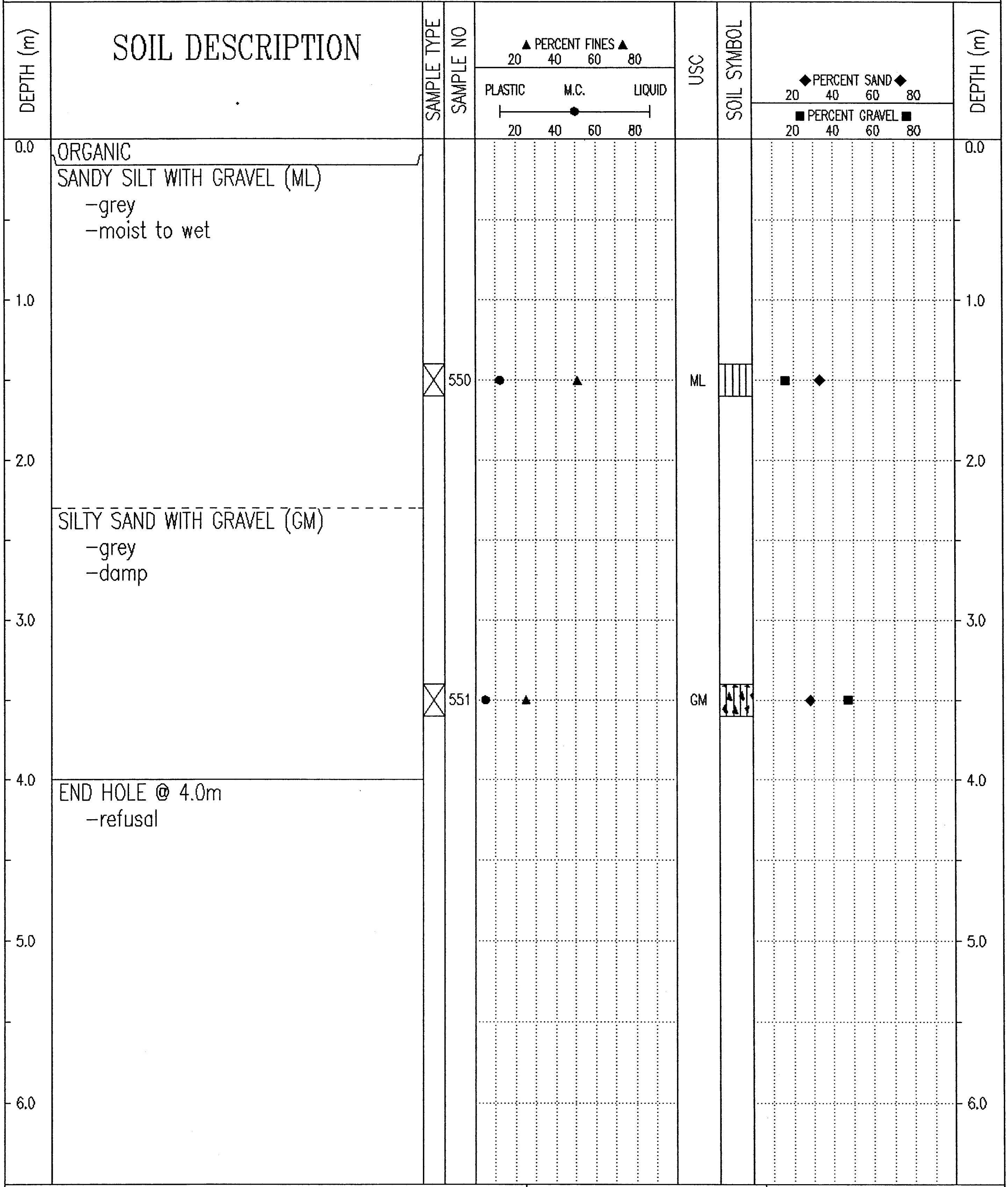
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-320
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1740+555 12m LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



ORGANIC

SANDY SILT WITH GRAVEL (ML)
-grey
-moist to wet

SILTY SAND WITH GRAVEL (GM)
-grey
-damp

END HOLE @ 4.0m
-refusal

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	REVIEWED BY:	COMPLETE: 01/08/01
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SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-319
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1740+750 14.9M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

SOIL DESCRIPTION

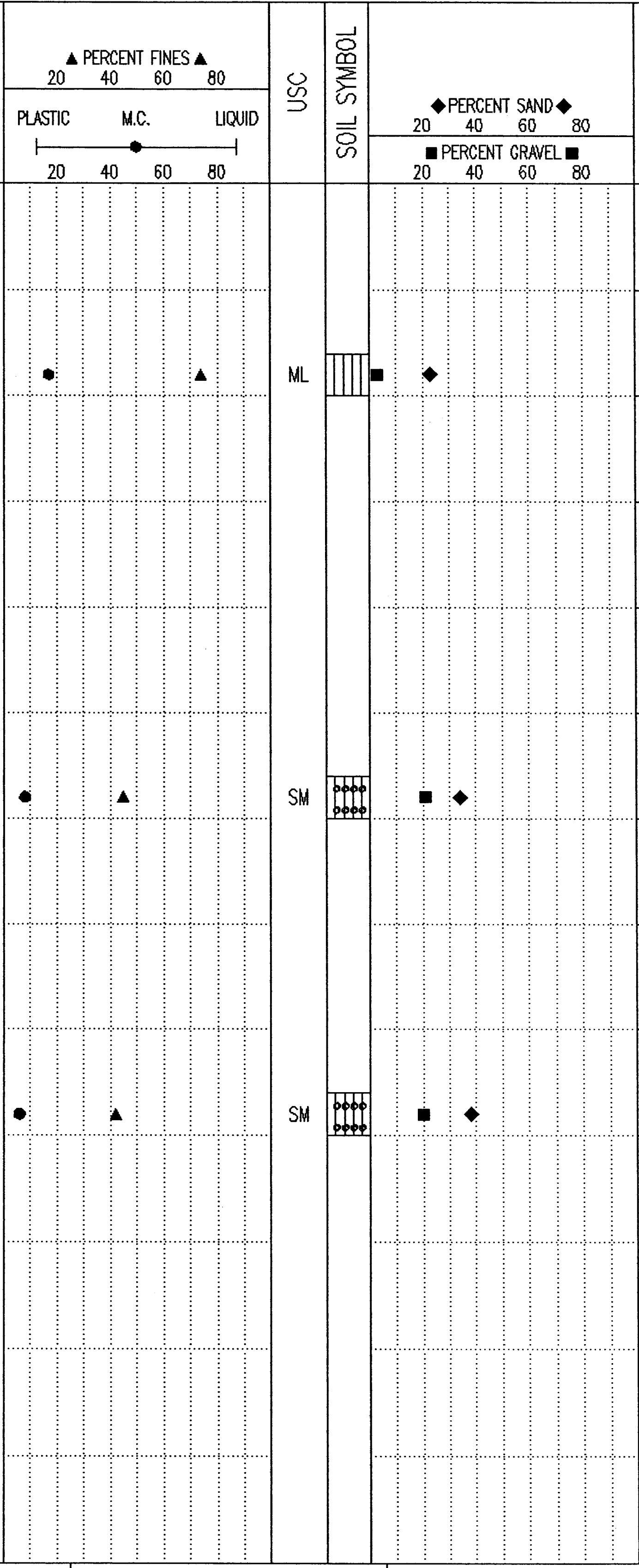
0.0 ORGANIC

SILT WITH SAND (ML)
- brown
- some organic
- trace +5mm material
- moist

SILTY SAND WITH SILT (SM)
- brown
- moist
- grindy drilling
- no organic below 2.5m
- more +5mm material below 2.5m

END HOLE @ 4.5m

SAMPLE TYPE	SAMPLE NO	USC
☒	547	ML
☒	548	SM
☒	549	SM



DEPTH (m): 0.0 1.0 2.0 3.0 4.0 5.0 6.0

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	COMPLETION DEPTH: 4.5 m COMPLETE: 01/08/01 Page 1 of 1

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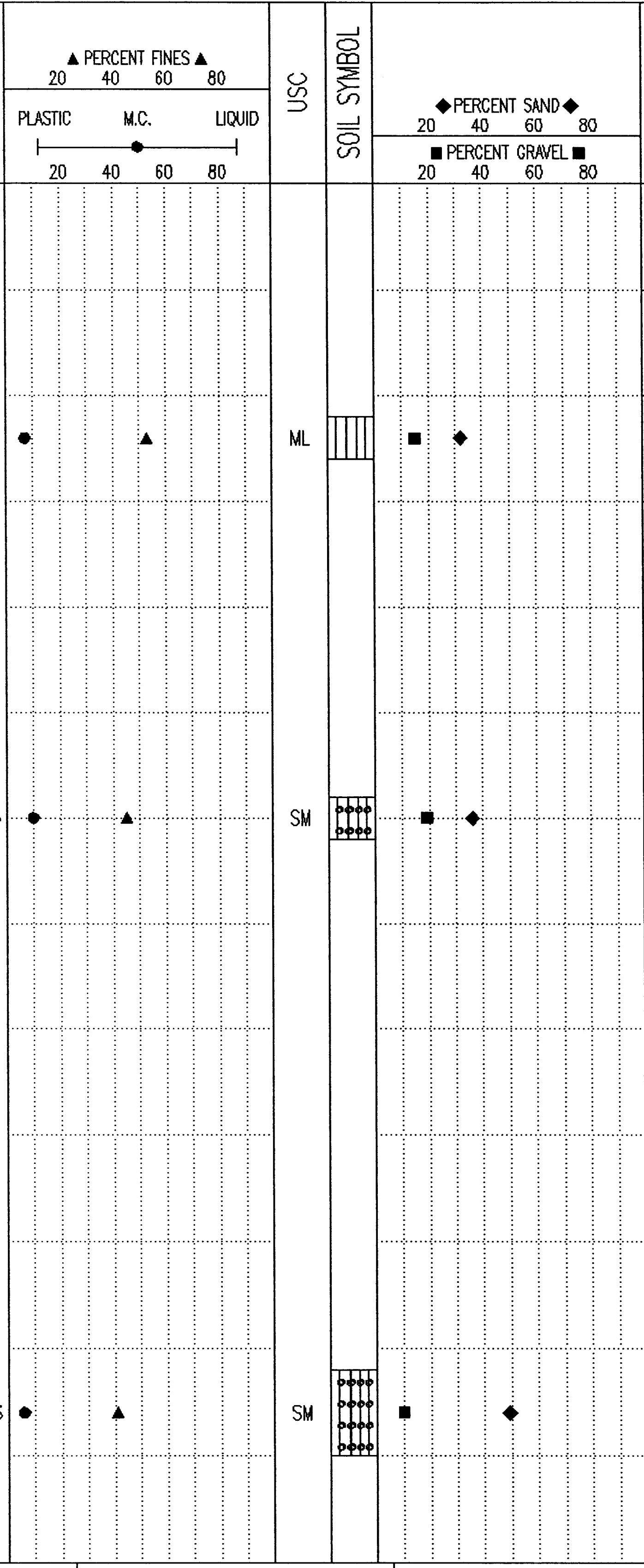
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-318
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1740+852 19.7M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▌ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC	DEPTH (m)
0.0	ORGANIC				0.0
	SANDY SILT (ML) -light brown -damp -trace +5mm material				
1.0					1.0
		☒	544	ML	
2.0					2.0
	SILTY SAND WITH GRAVEL (SM) -frozen (Nf) -harder drilling				
3.0		☒	545	SM	3.0
4.0					4.0
	SILTY SAND (SM) -brown -moist -easier slightly smoother drilling				
5.0	-moist below 5.0m				5.0
		☒	546	SM	
6.0	END HOLE @ 6.0m				6.0



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REVIEWED BY:	COMPLETE: 01/07/31
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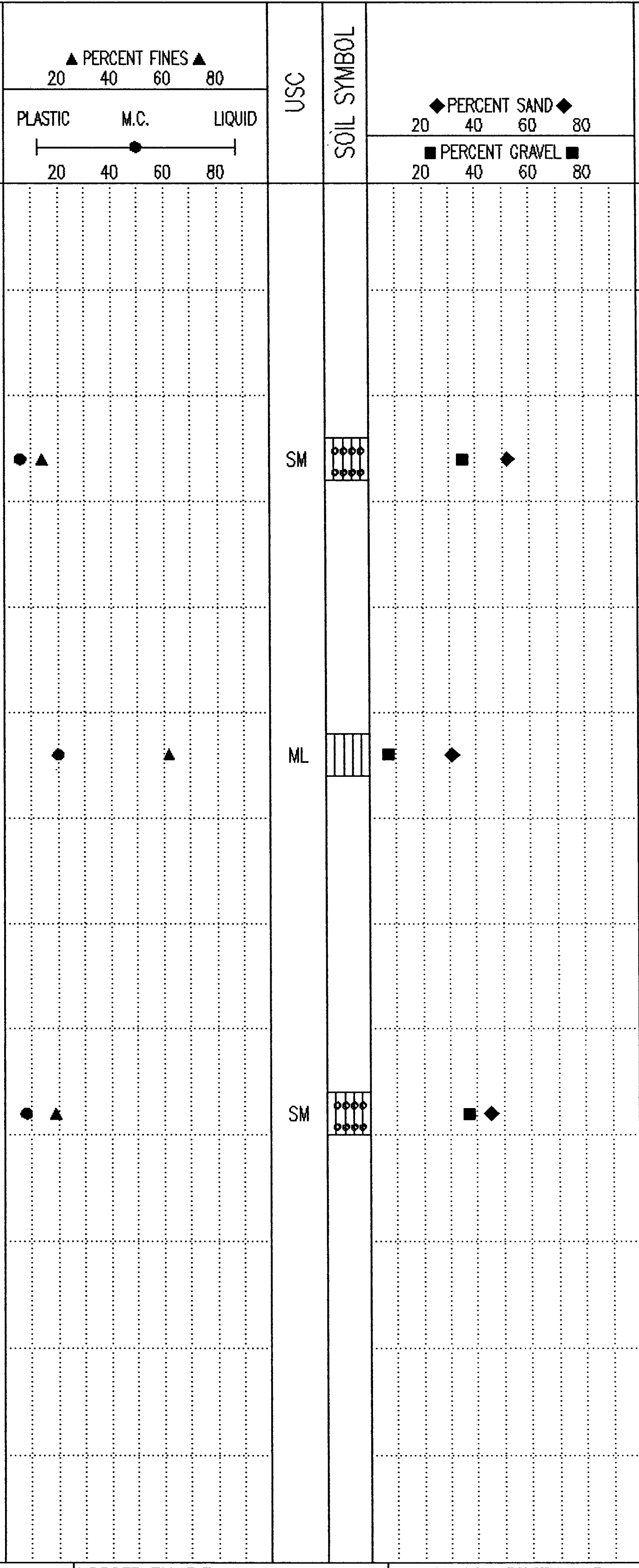
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-317
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1740+971 21.9M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC			
	SILTY SAND WITH GRAVEL (SM) -brown -damp -maximum 25mm material augered up			
1.0				
		☒	541	SM
2.0				
	ORGANICS & SANDY SILT (ML) -brown -saturated -trace +5mm material -smooth easy drilling	☒	542	ML
3.0				
	SILTY SAND WITH GRAVEL (SM) -brown -moist -maximum 25mm material augered up -grindy drilling			
4.0				
		☒	543	SM
	END HOLE @ 4.5m			
5.0				
6.0				



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LOGGED BY: D.T.	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 01/07/31
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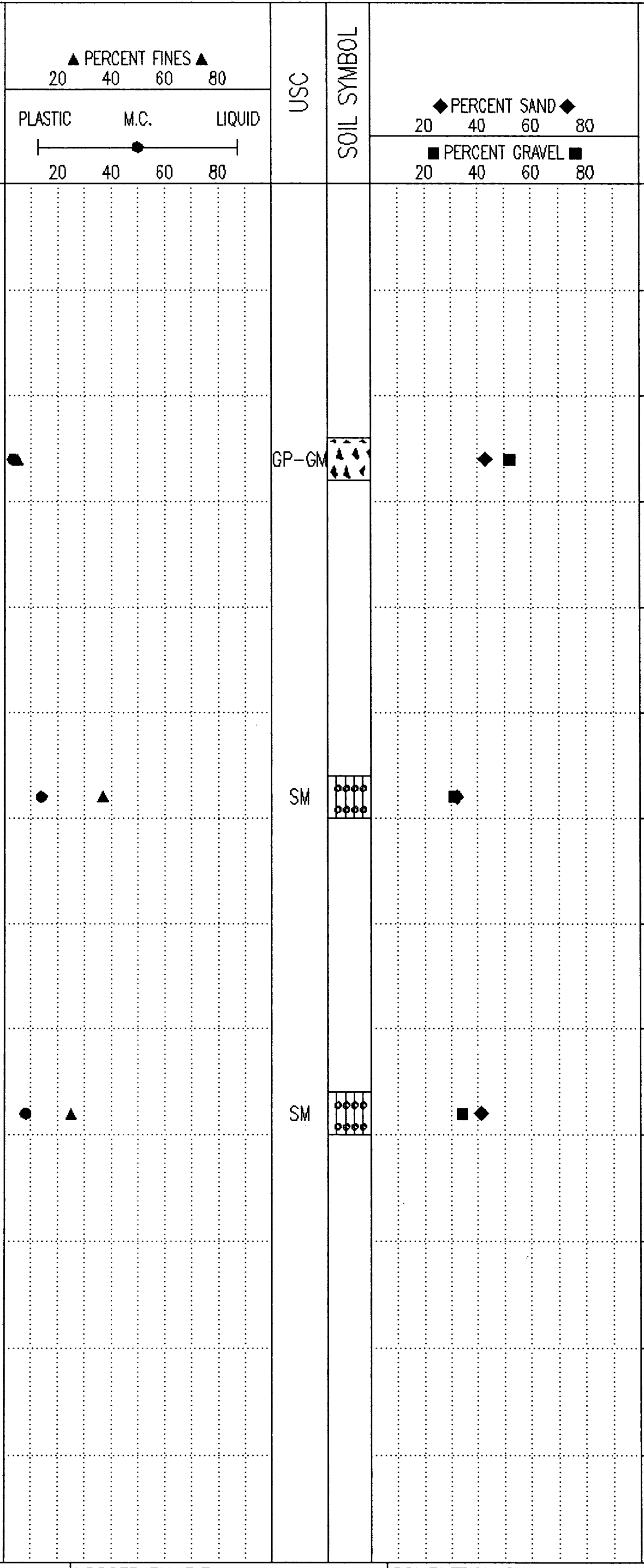
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 612-339
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1741+070 20M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO
0.0	POORLY GRADED GRAVEL WITH SILT & SAND TO SILTY SAND WITH GRAVEL (GP-GM)-(SM) -brown -maximum 50mm material augered up -grindy drilling		
1.0		☒	586
2.0	-moist to wet below 2.0m		
3.0		☒	587
4.0		☒	588
4.5	END HOLE @ 4.5m		
5.0			
6.0			



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	REVIEWED BY:	COMPLETE: 01/08/02
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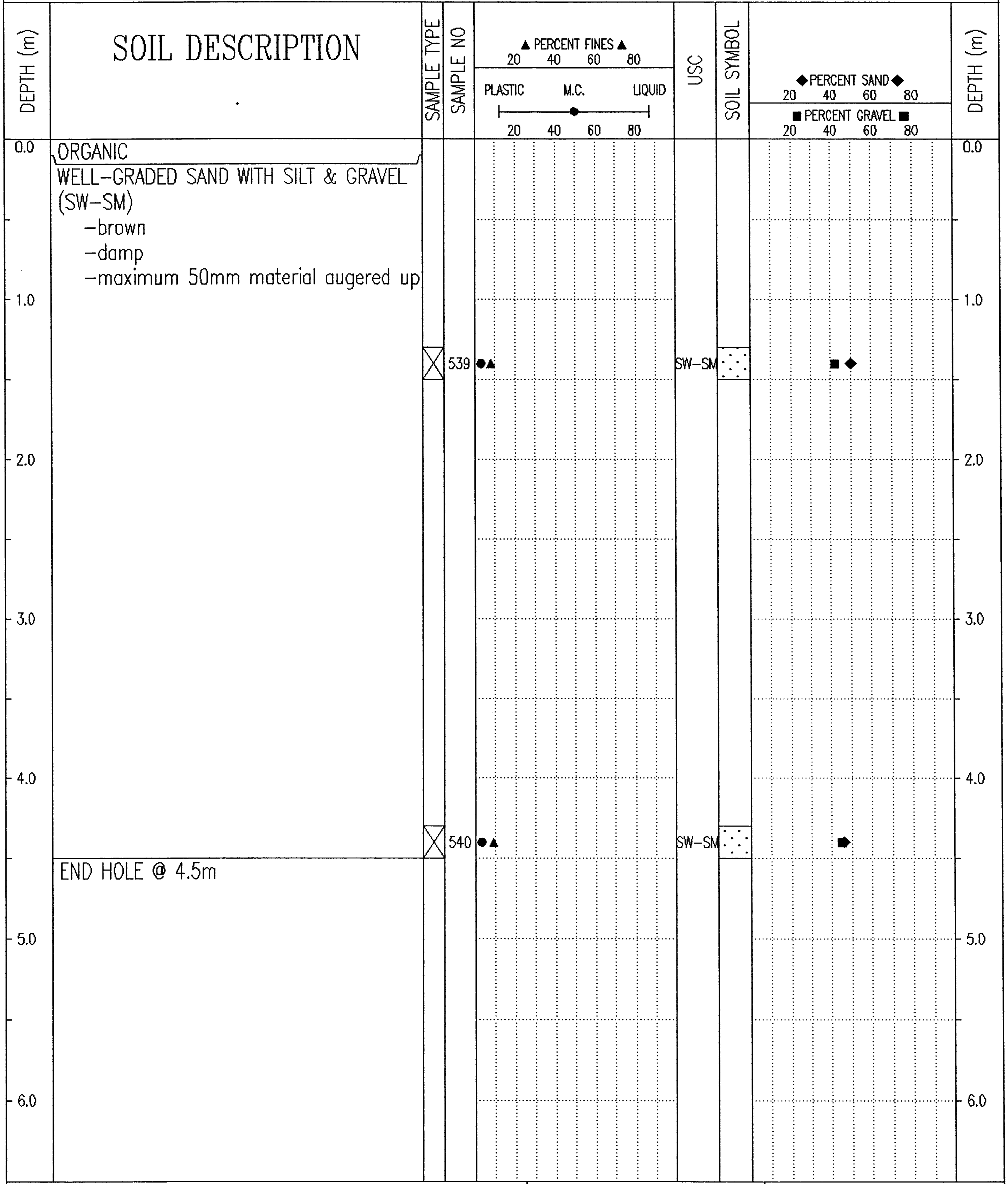
02/01/29 12:00PM

SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-316
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1741+078 18.5M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◩ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



ORGANIC

WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)
- brown
- damp
- maximum 50mm material augered up

END HOLE @ 4.5m

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/07/31
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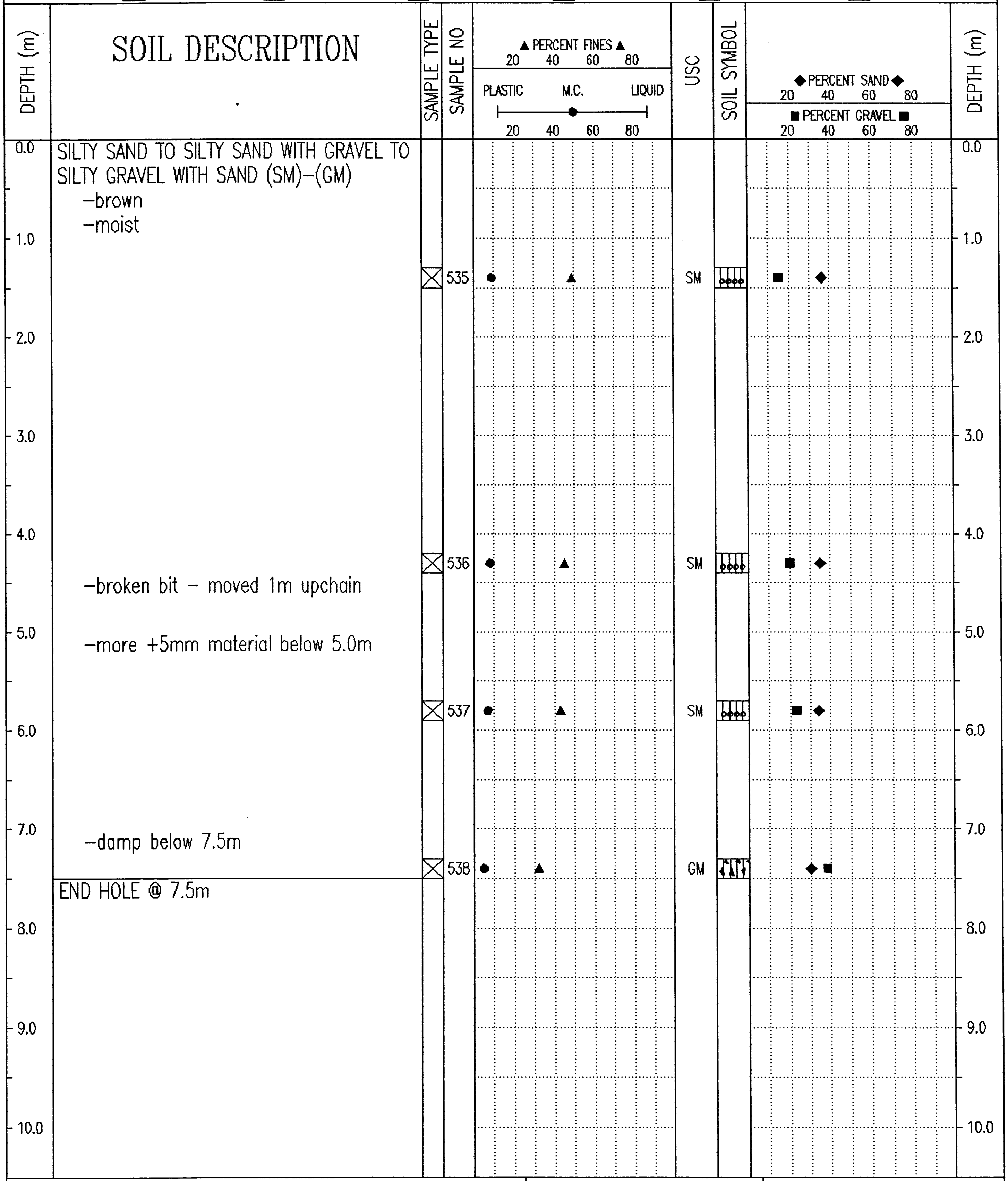
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-315
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1741+151 18.8M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SILTY SAND TO SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM)
- -brown
- -moist
- -broken bit - moved 1m upchain
- -more +5mm material below 5.0m
- -damp below 7.5m

END HOLE @ 7.5m

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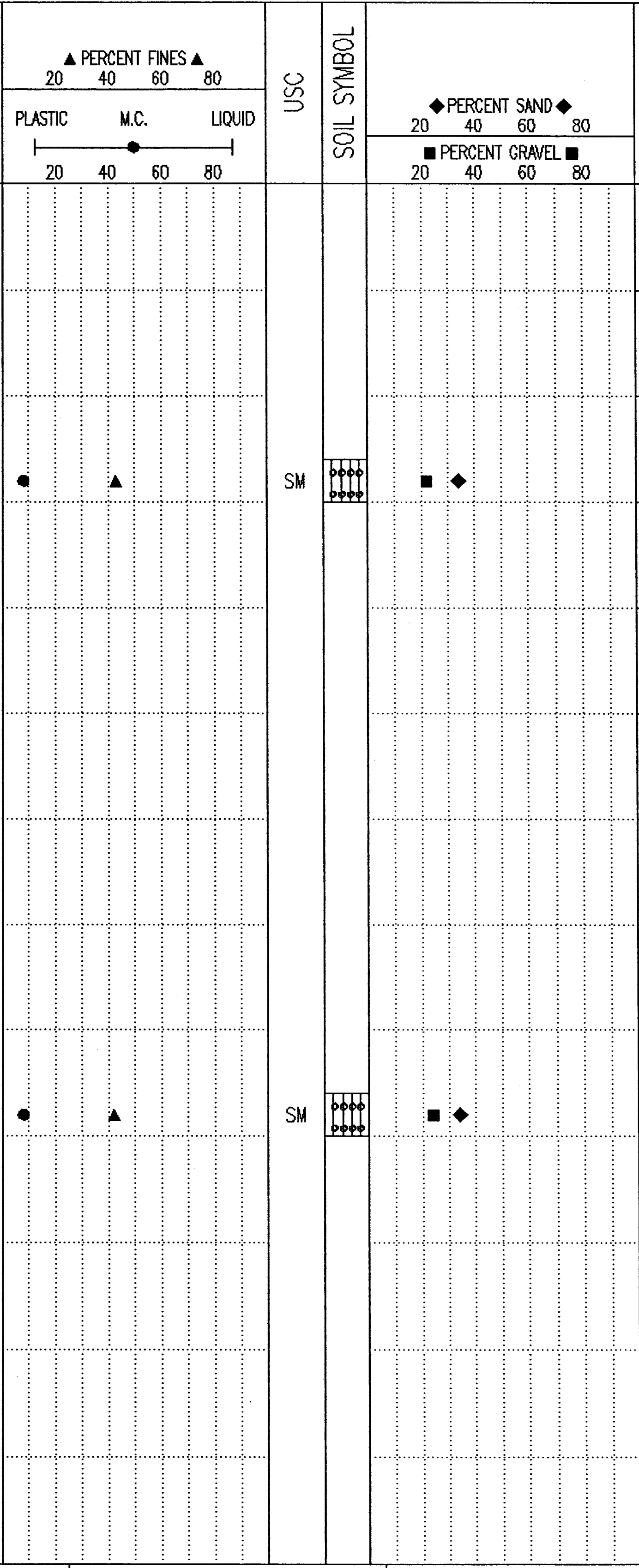
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-304
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1741+276 9.1M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC -brown			
	SILTY SAND WITH GRAVEL (SM) -olive -moist			
1.0				
	-some organic contamination in sample #513	☒	513	SM
2.0				
3.0				
4.0	-no organic contamination below 4.0m			
		☒	514	SM
	END HOLE @ 4.5m			
5.0				
6.0				



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	REVIEWED BY:	COMPLETE: 01/07/30
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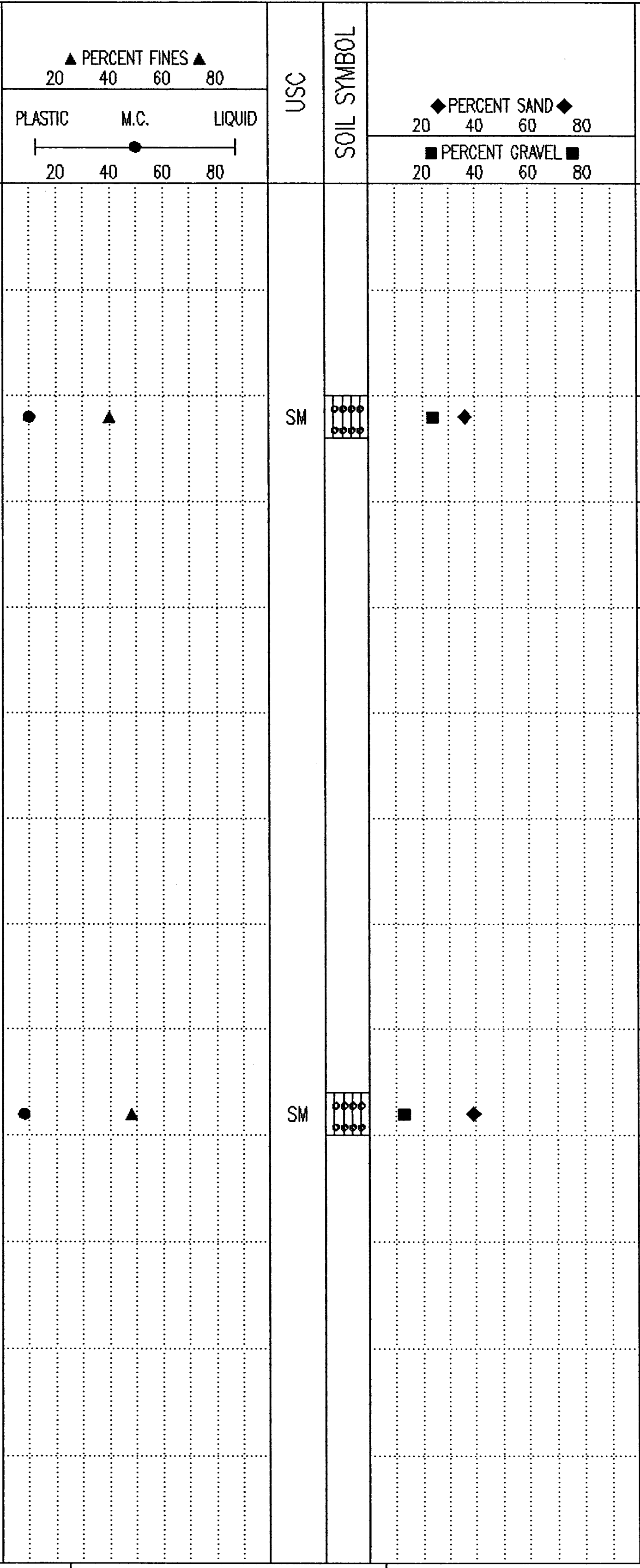
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-303
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1741+374 12M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	SILTY SAND WITH GRAVEL TO SILTY SAND (SM) -brown -moist			
1.0		☒	511	SM
2.0				
3.0				
4.0		☒	512	SM
4.5	END HOLE @ 4.5m			
5.0				
6.0				



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	REVIEWED BY:	COMPLETE: 01/07/30
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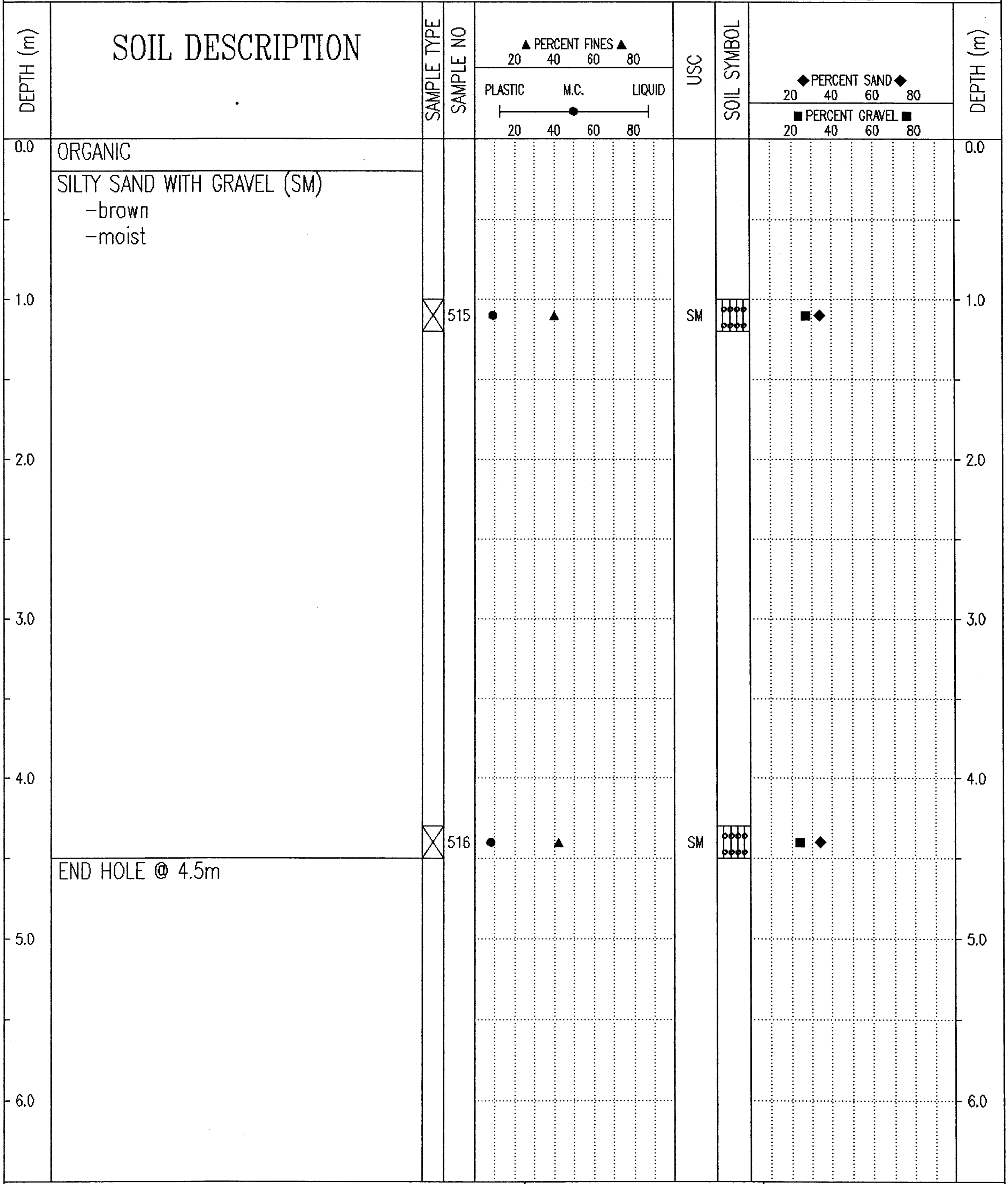
SUBSURFACE EXPLORATION & TESTING REPORT | SEG 11 | TEST HOLE NO: 611-305

ENGINEERING CAPITAL | ROW TESTING A/H | Project No: 092-202101-0361

B40-L DRILL 6"AUGERS | LOCATION:1741+401 3.4M RT | ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



ORGANIC

SILTY SAND WITH GRAVEL (SM)
-brown
-moist

END HOLE @ 4.5m

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Fig. No:

COMPLETION DEPTH: 4.5 m
COMPLETE: 01/07/30
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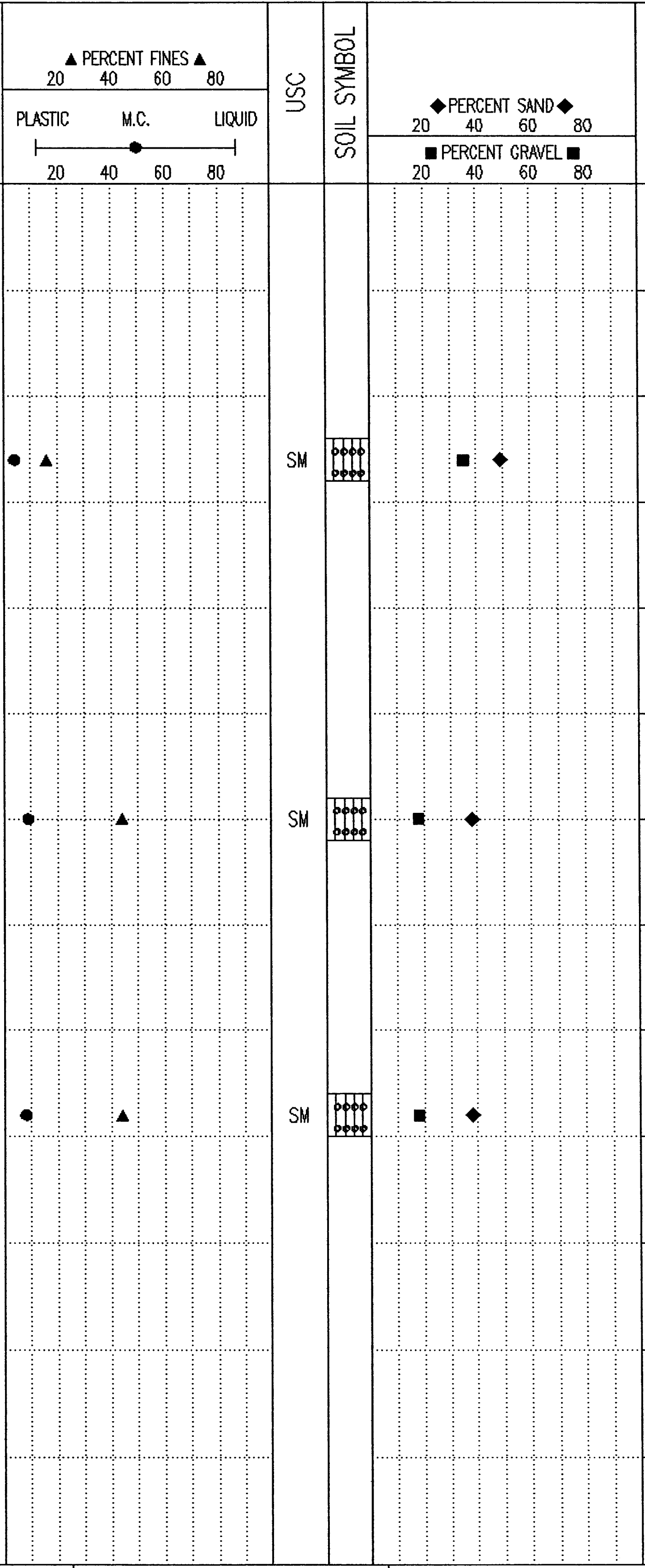
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-302
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1741+485 0.5M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC			
	SILTY SAND WITH GRAVEL (SM) -brown -damp -maximum 25mm material augered up			
1.0		☒	508	SM
2.0	-moist to wet below 2.5m -smoother easier drilling below 2.5m			
3.0		☒	509	SM
4.0	-damp to moist below 3.8m	☒	510	SM
	END HOLE @ 4.5m			
5.0				
6.0				



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LOGGED BY: D.T.	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 01/07/30
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SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-301
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1741+579 9.6M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	SANDY SILTY GRAVEL -brown -moist -maximum 25mm material augered up -grindy drilling			
1.0	SILTY SAND WITH GRAVEL TO SILTY SAND (SM) -brown -moist to wet -smoother easier drilling	☒	506	SM
		☒	507	SM
4.5	END HOLE @ 4.5m			

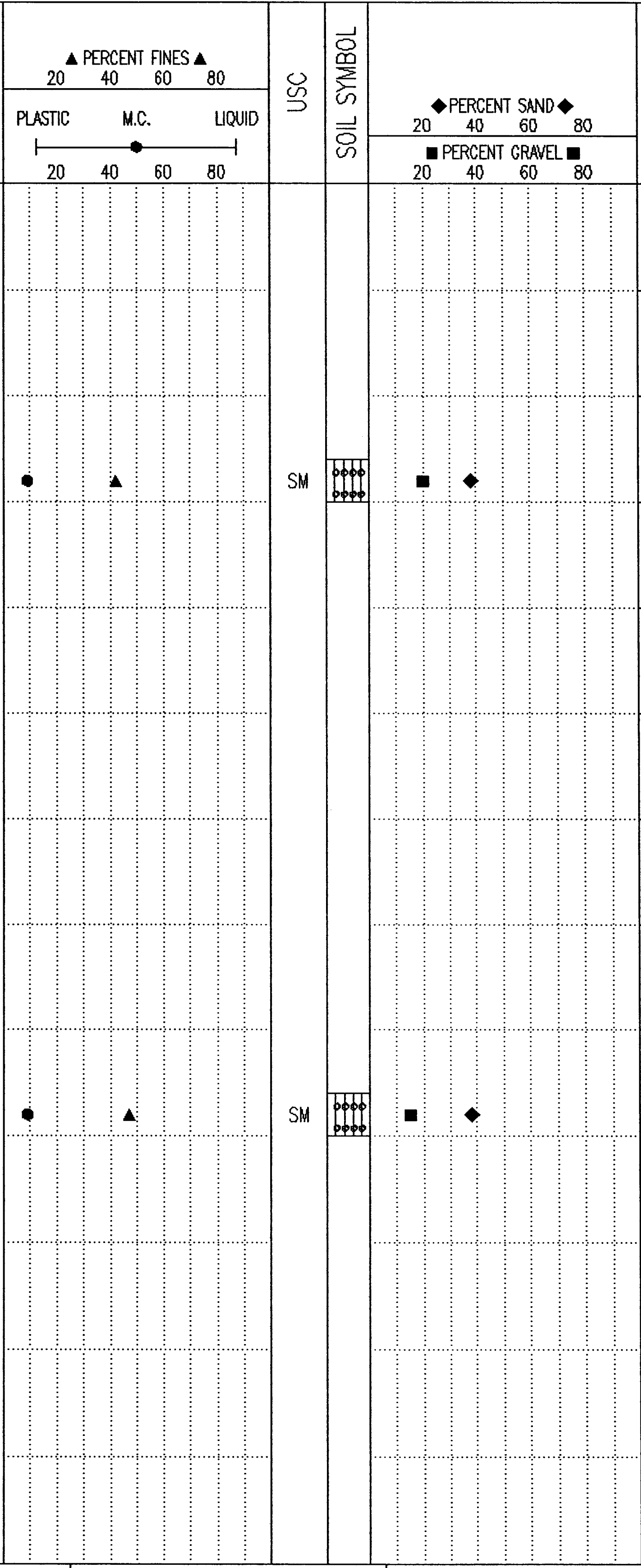

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Fig. No:

COMPLETION DEPTH: 4.5 m
COMPLETE: 01/07/30

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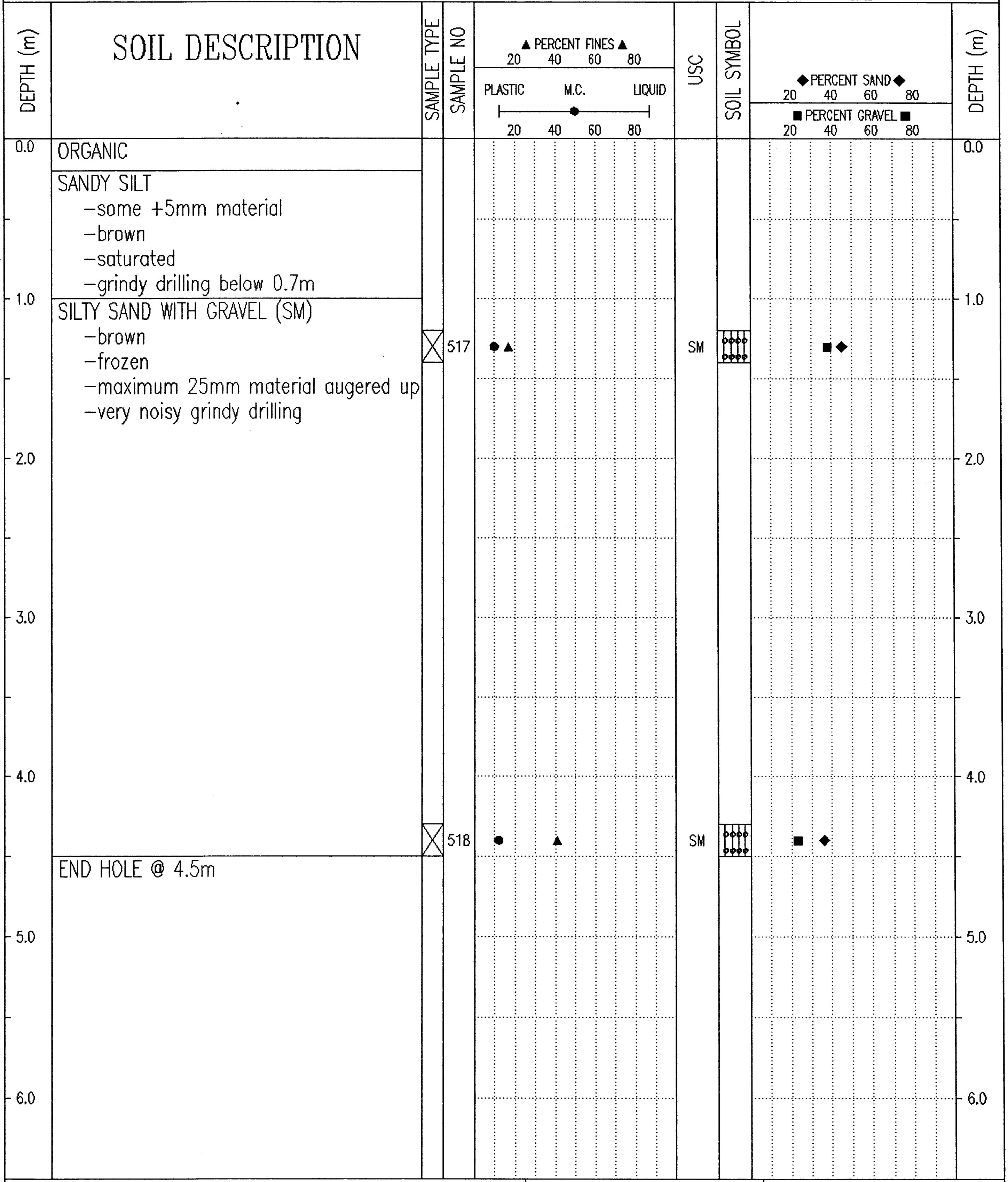
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-306
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1741+607 28.5M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ▮ CORE



0.0 ORGANIC

SANDY SILT
- some +5mm material
- brown
- saturated
- grindy drilling below 0.7m

1.0 SILTY SAND WITH GRAVEL (SM)
- brown
- frozen
- maximum 25mm material augered up
- very noisy grindy drilling

END HOLE @ 4.5m

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.5 m
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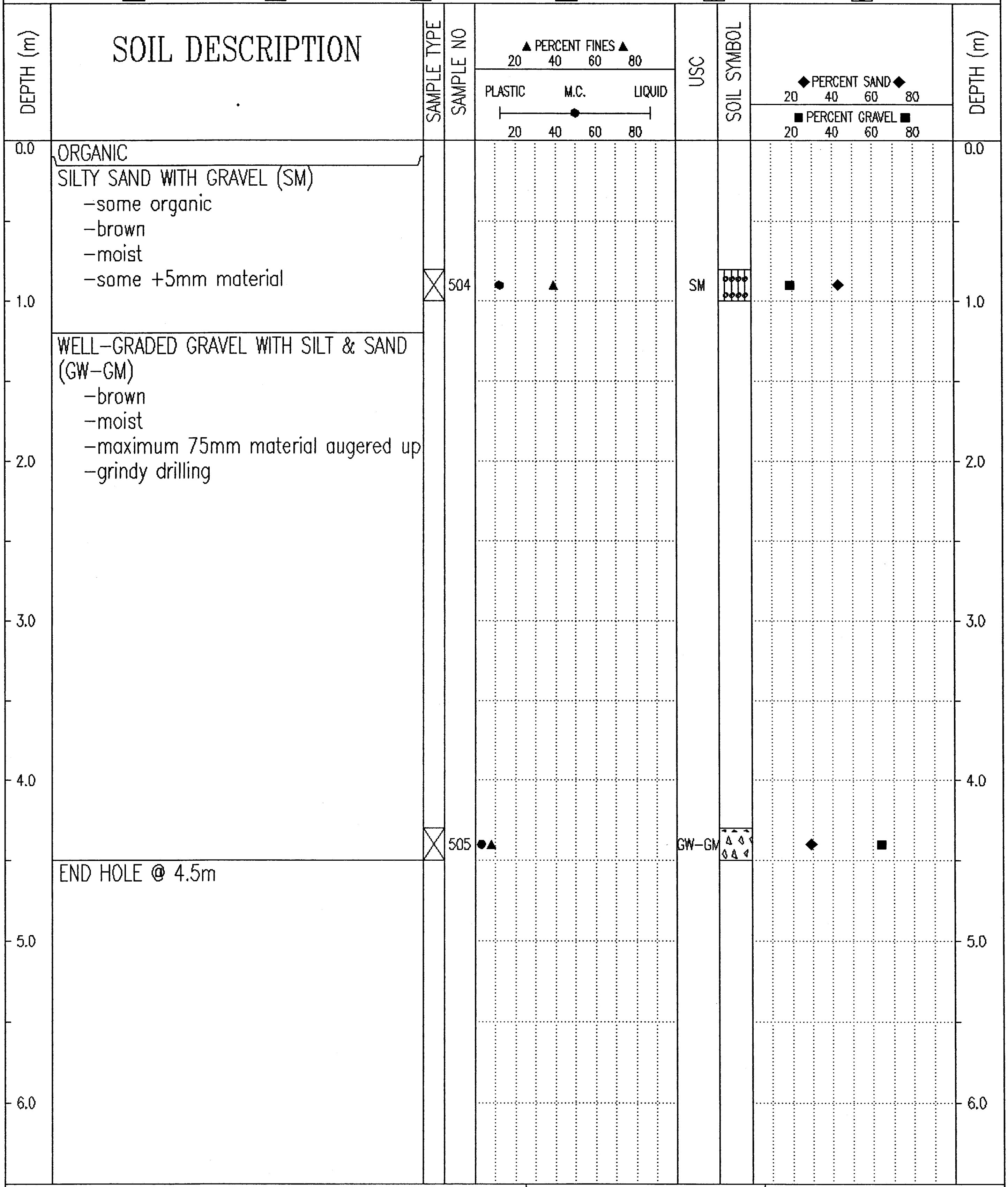
02/02/14 09:56AM

SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-300
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1741+679 5.7M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



Depth (m)	Soil Description	Sample No	USC
0.0	ORGANIC		
	SILTY SAND WITH GRAVEL (SM) -some organic -brown -moist -some +5mm material	504	SM
	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM) -brown -moist -maximum 75mm material augered up -grindy drilling	505	GW-GM
4.5	END HOLE @ 4.5m		

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	REVIEWED BY:	COMPLETE: 01/07/30
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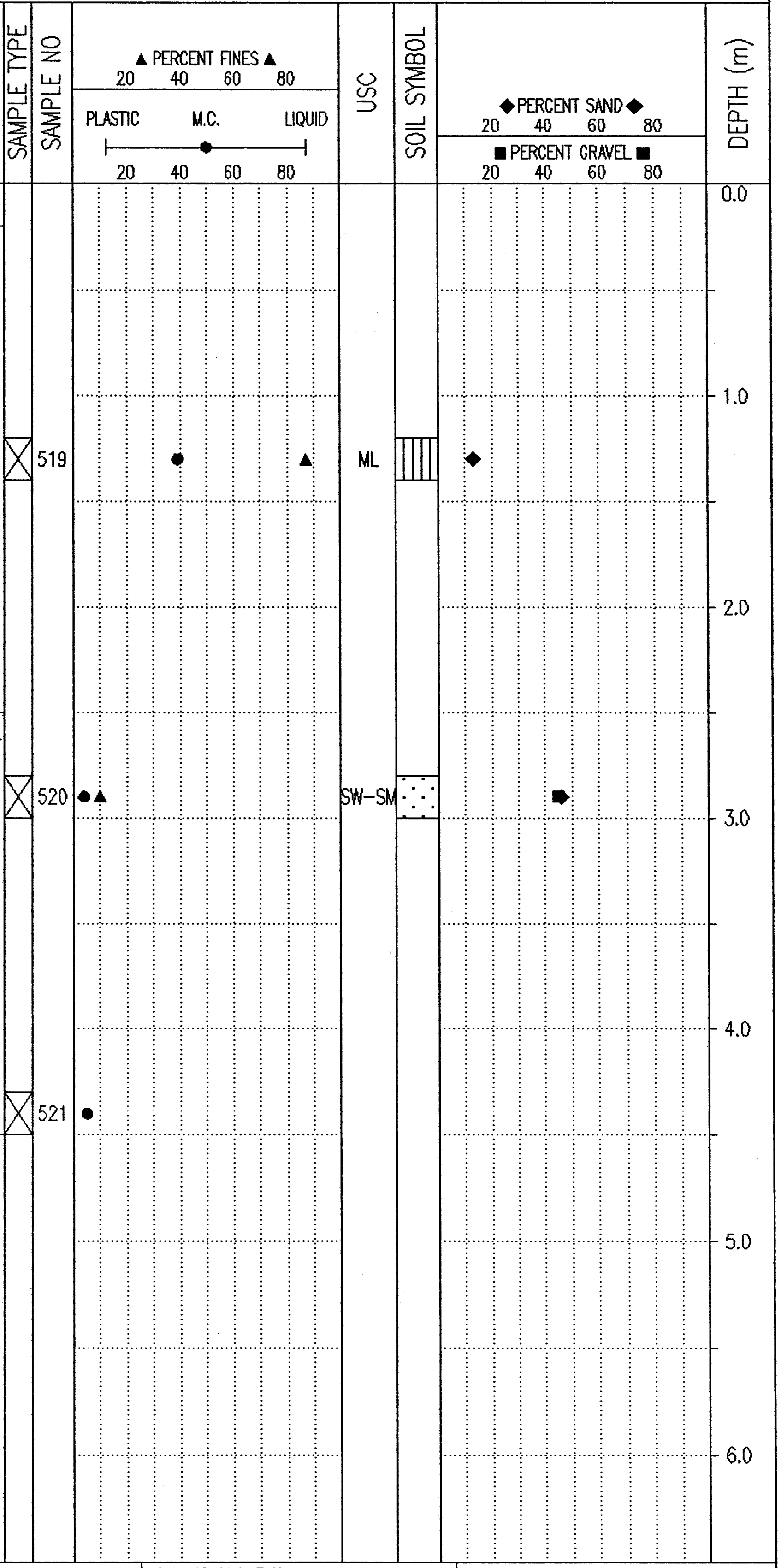
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-307
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1741+779 15M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	ORGANIC
	ORGANICS & SILT (ML) -dark brown -moist to wet
	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -brown -moist -grindy drilling -lost sample # 521
4.5	END HOLE @ 4.5m



Government of Yukon Transportation Engineering	LOGGED BY: D.T.
	REVIEWED BY:
	Fig. No:
	COMPLETION DEPTH: 4.5 m
	COMPLETE: 01/07/30
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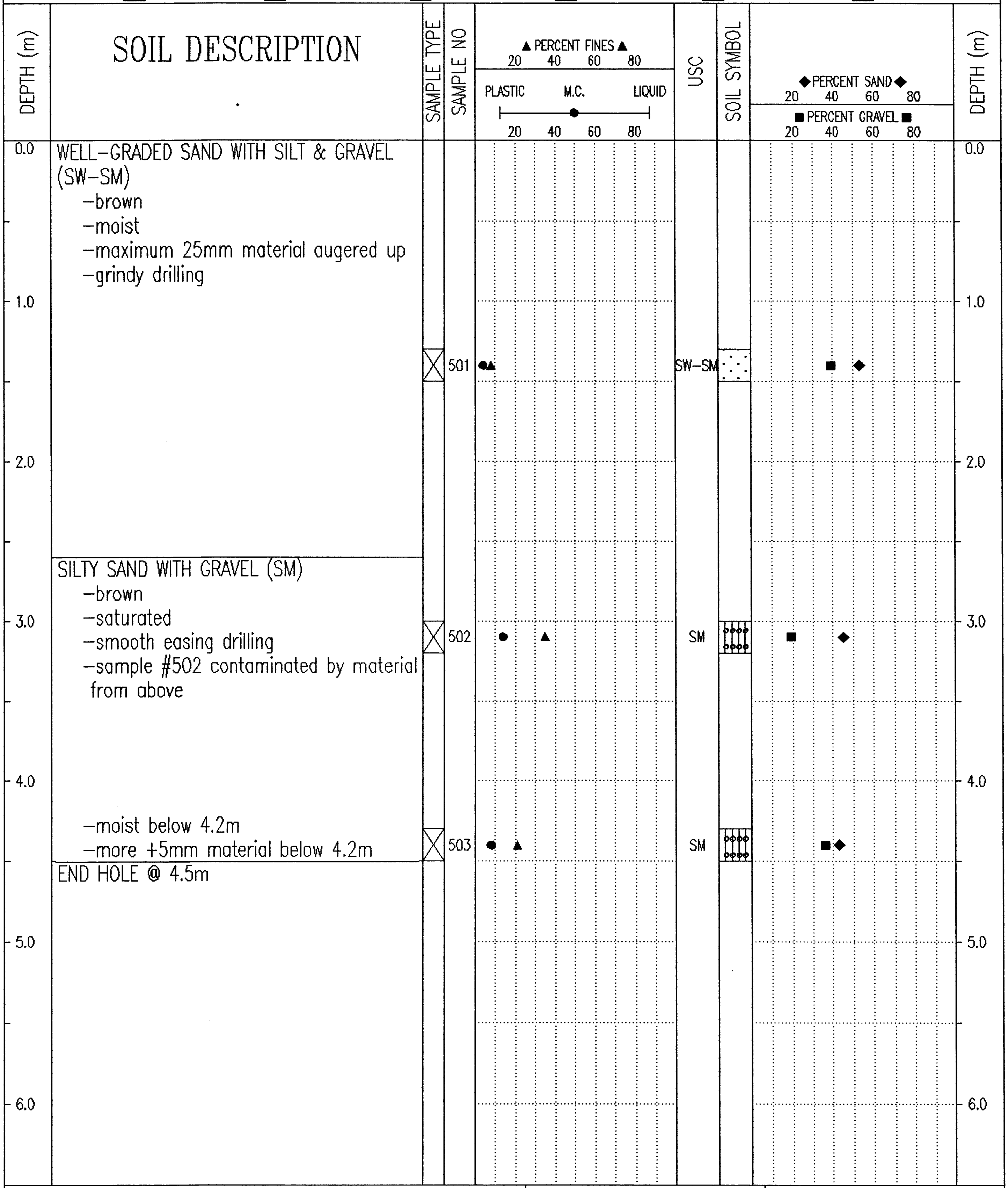
02/03/21 01:47PM

SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-299
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1741+783 9.4m LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)
- brown
- moist
- maximum 25mm material augered up
- grindy drilling

SILTY SAND WITH GRAVEL (SM)
- brown
- saturated
- smooth easing drilling
- sample #502 contaminated by material from above
- moist below 4.2m
- more +5mm material below 4.2m

END HOLE @ 4.5m

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	REVIEWED BY:	COMPLETE: 01/07/30
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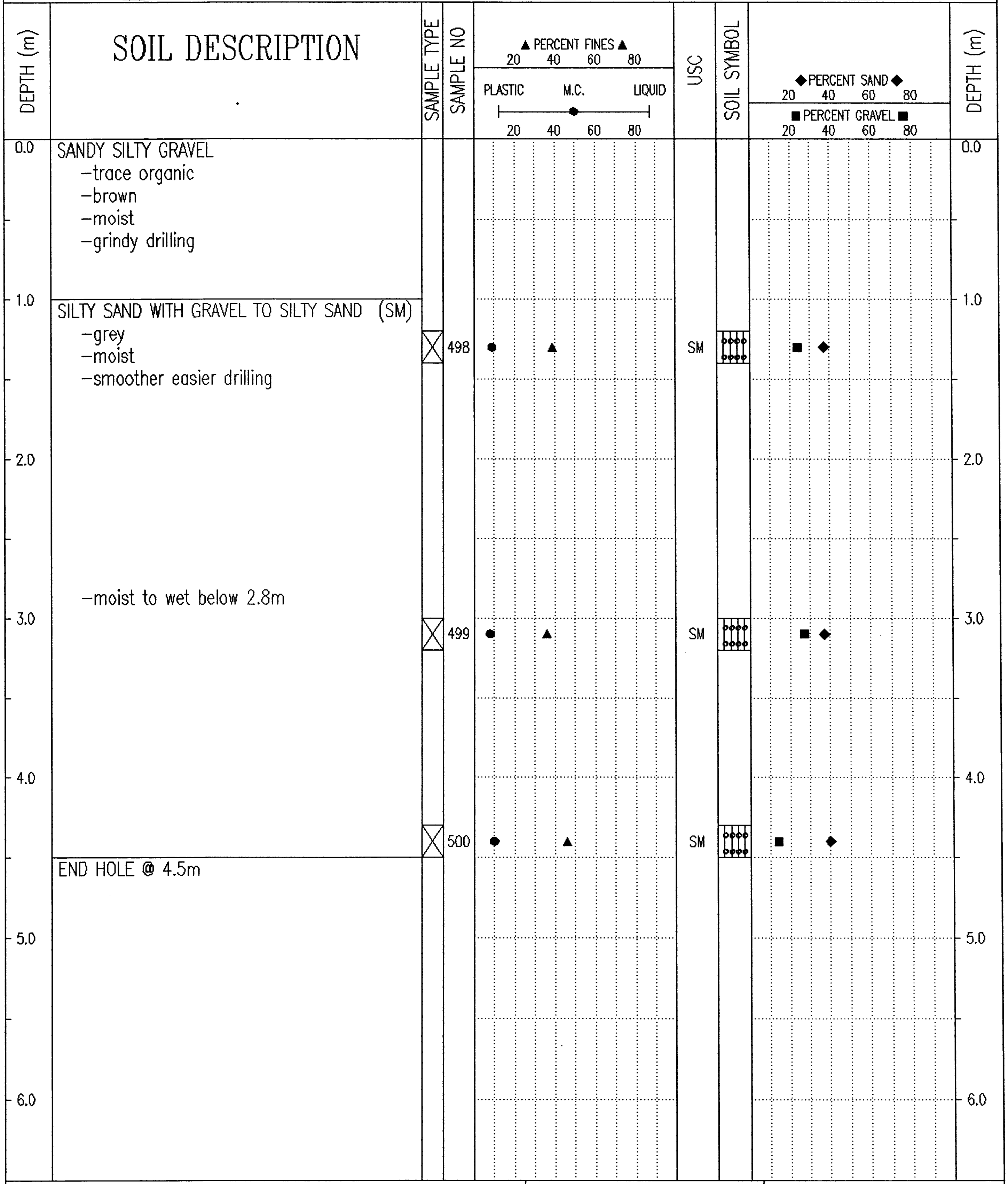
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-298
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1741+898 14.7LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SOIL DESCRIPTION

0.0 SANDY SILTY GRAVEL
- -trace organic
- -brown
- -moist
- -grindy drilling

1.0 SILTY SAND WITH GRAVEL TO SILTY SAND (SM)
- -grey
- -moist
- -smoother easier drilling
- -moist to wet below 2.8m

END HOLE @ 4.5m

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	REVIEWED BY:	COMPLETE: 01/07/30
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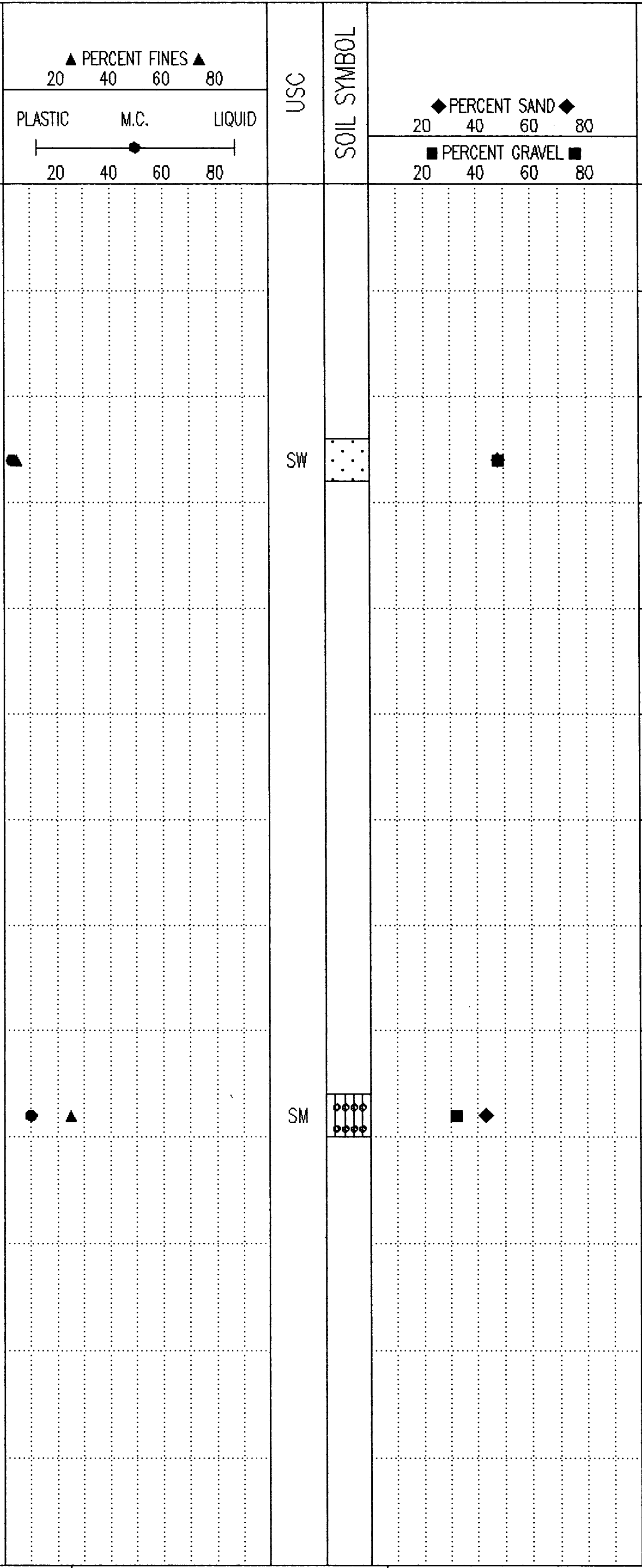
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-308
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1741+920 20M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC -brown -moist			
	WELL-GRADED SAND WITH GRAVEL (SW) -brown -maximum 25mm material augered up -grindy drilling -refusal @ 1.0m - moved 2m downchain			
1.0		☒	522	SW
2.0				
3.0	SILTY SAND WITH GRAVEL (SM) -grey -saturated -smooth easy drilling			
4.0		☒	523	SM
	END HOLE @ 4.5m			
5.0				
6.0				



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LOGGED BY: D.T.	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 01/07/31
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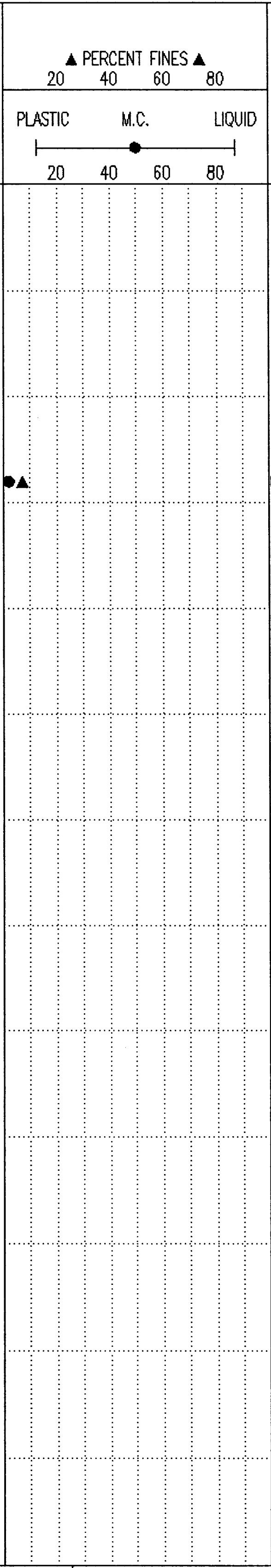
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611–309
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092–202101–0361
B40–L DRILL 6"AUGERS	LOCATION:1741+975 25M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ◨ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	SANDY SILTY ORGANIC –brown –moist			
0.5	POORLY GRADED GRAVEL WITH SILT & SAND (GP–GM) –brown –damp –maximum 50mm material augered up –grindy drilling			
1.3–1.5		☒	524	GP–GM
3.0	ICE –smooth drilling			
4.5	END HOLE @ 4.5m			



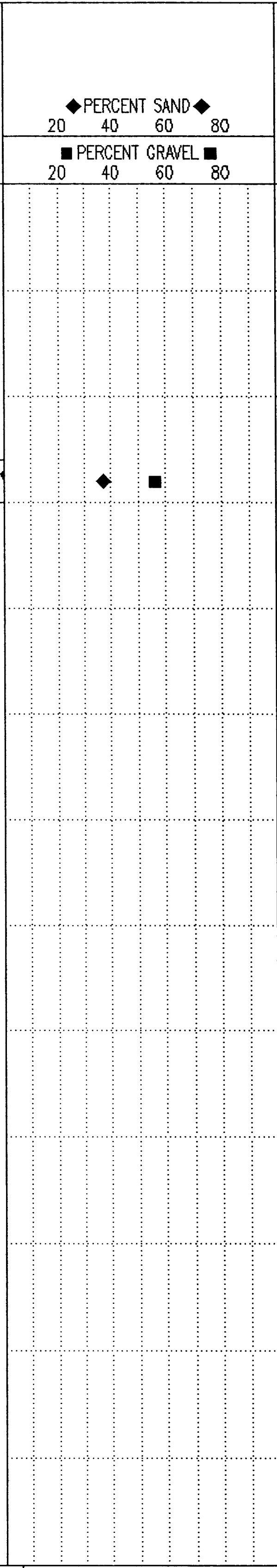


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Fig. No:
COMPLETION DEPTH: 4.5 m
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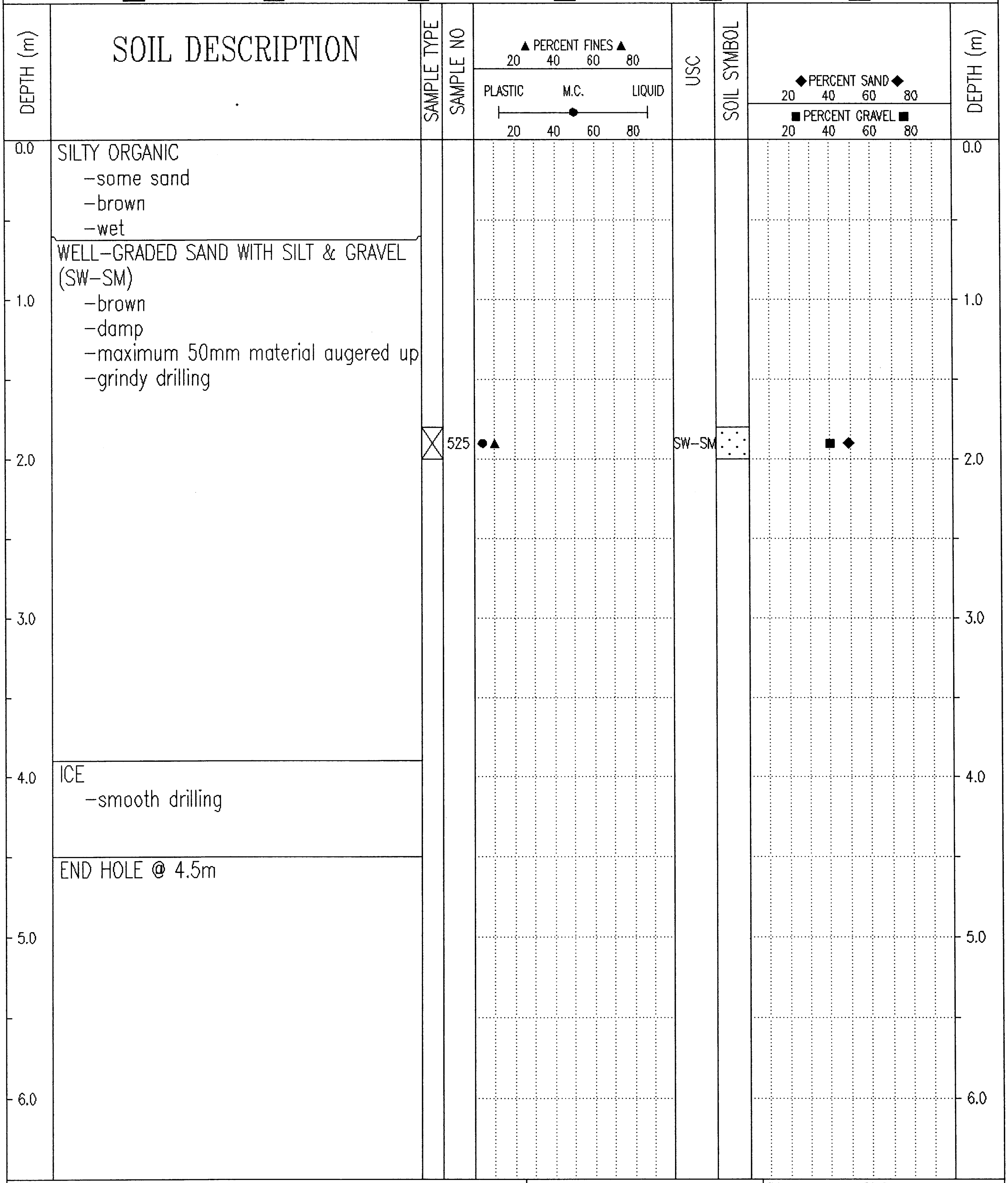
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-310
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1741+997 20M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SOIL DESCRIPTION

SILTY ORGANIC
- -some sand
- -brown
- -wet

WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)
- -brown
- -damp
- -maximum 50mm material augered up
- -grindy drilling

ICE
- -smooth drilling

END HOLE @ 4.5m

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REVIEWED BY:	COMPLETE: 01/07/31
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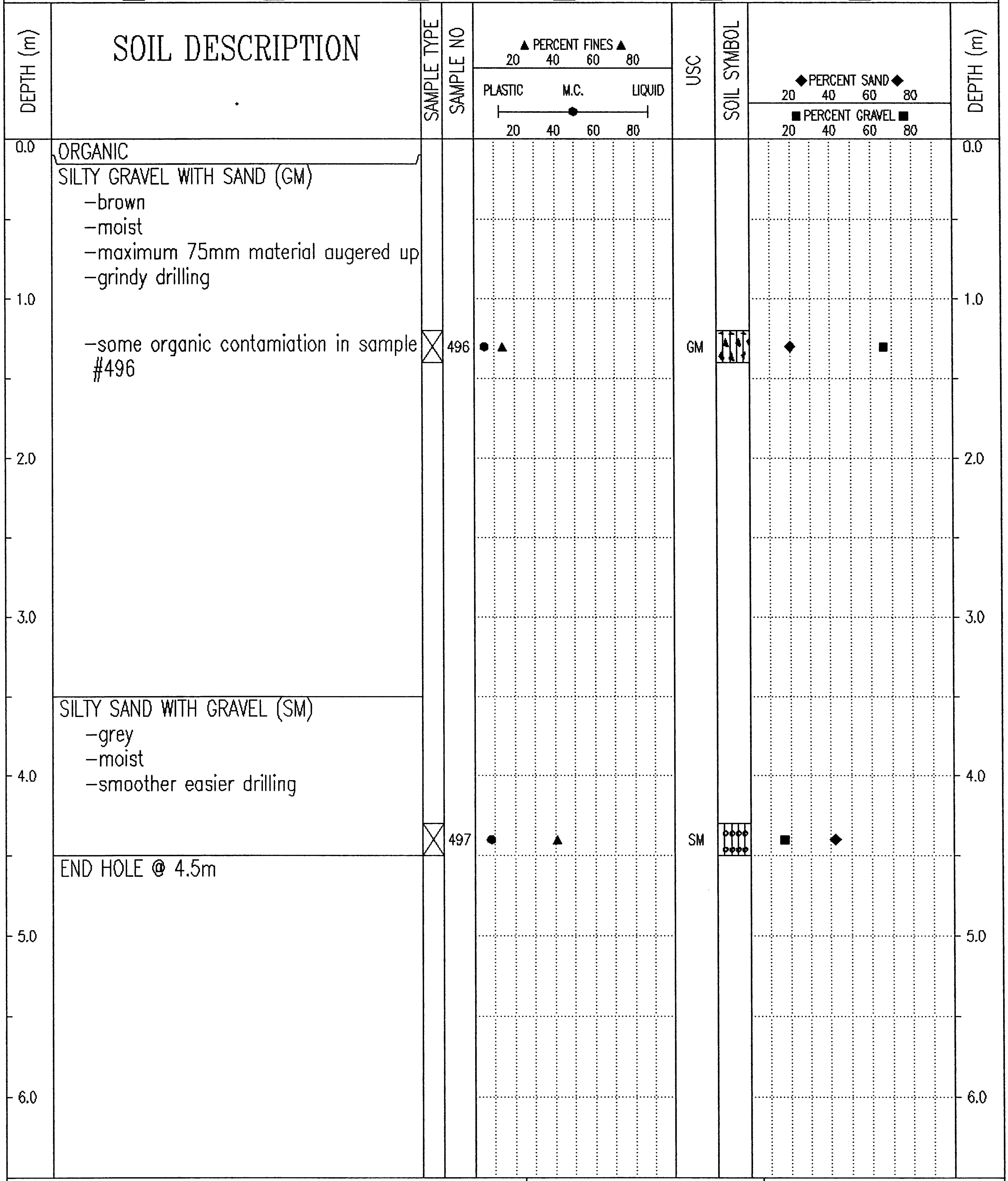
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-297
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1741+999 11.7M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



SOIL DESCRIPTION

ORGANIC

SILTY GRAVEL WITH SAND (GM)
- brown
- moist
- maximum 75mm material augered up
- grindy drilling
- some organic contamiation in sample #496

SILTY SAND WITH GRAVEL (SM)
- grey
- moist
- smoother easier drilling

END HOLE @ 4.5m

SAMPLE TYPE	SAMPLE NO	USC
☒	496	GM
☒	497	SM

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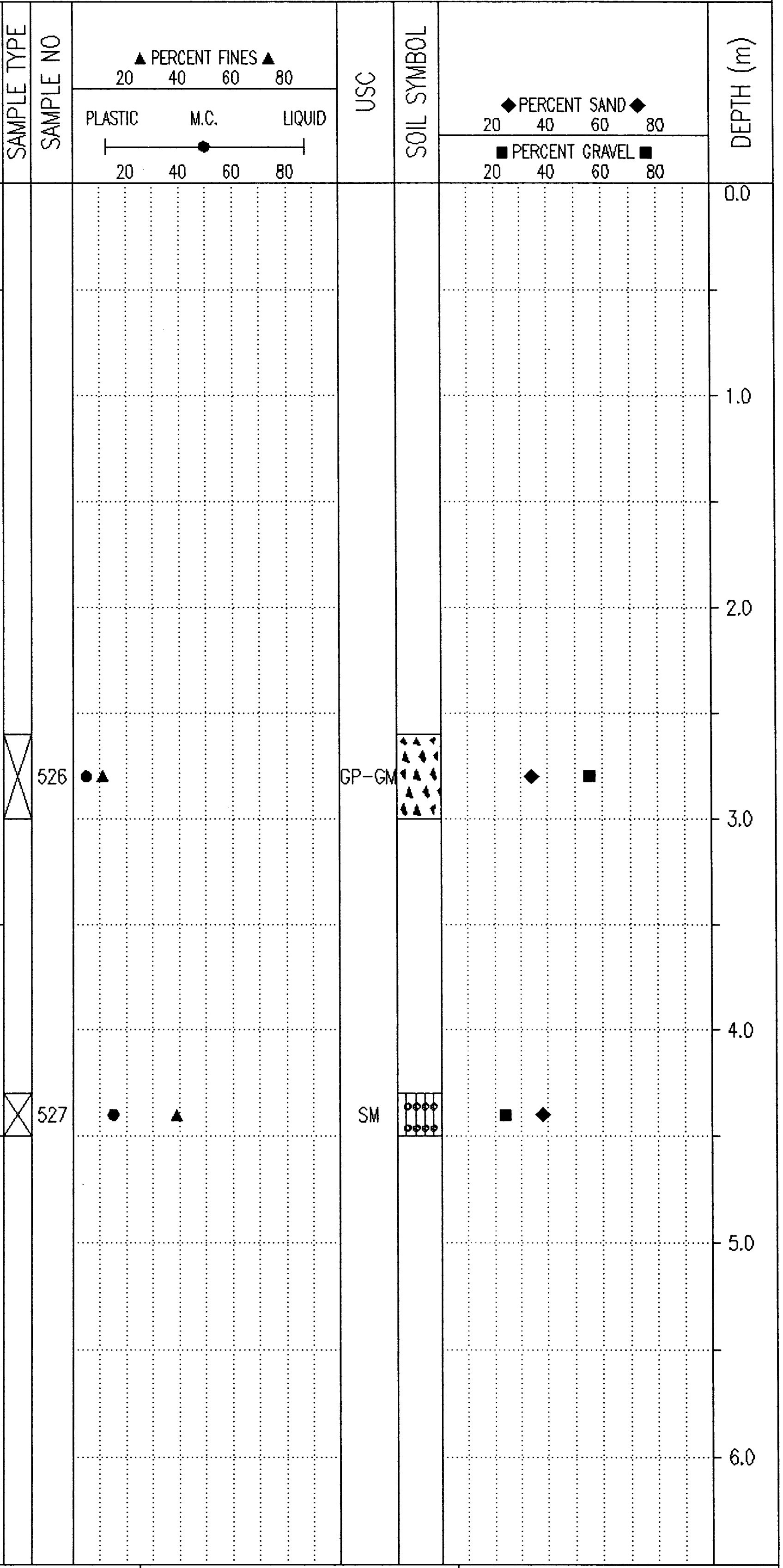
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-311
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1742+026 18M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	ORGANIC, SILT & ASH
0.5	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown -damp -maximum 50mm material augered up -grindy drilling -some organic contamination in sample #526
3.5	SILTY SAND WITH GRAVEL (SM) -grey -frozen (Nb) -smoother drilling
4.5	END HOLE @ 4.5m



Government of Yukon Transportation Engineering	LOGGED BY: D.T. REVIEWED BY: Fig. No:
	COMPLETION DEPTH: 4.5 m COMPLETE: 01/07/31 Page 1 of 1

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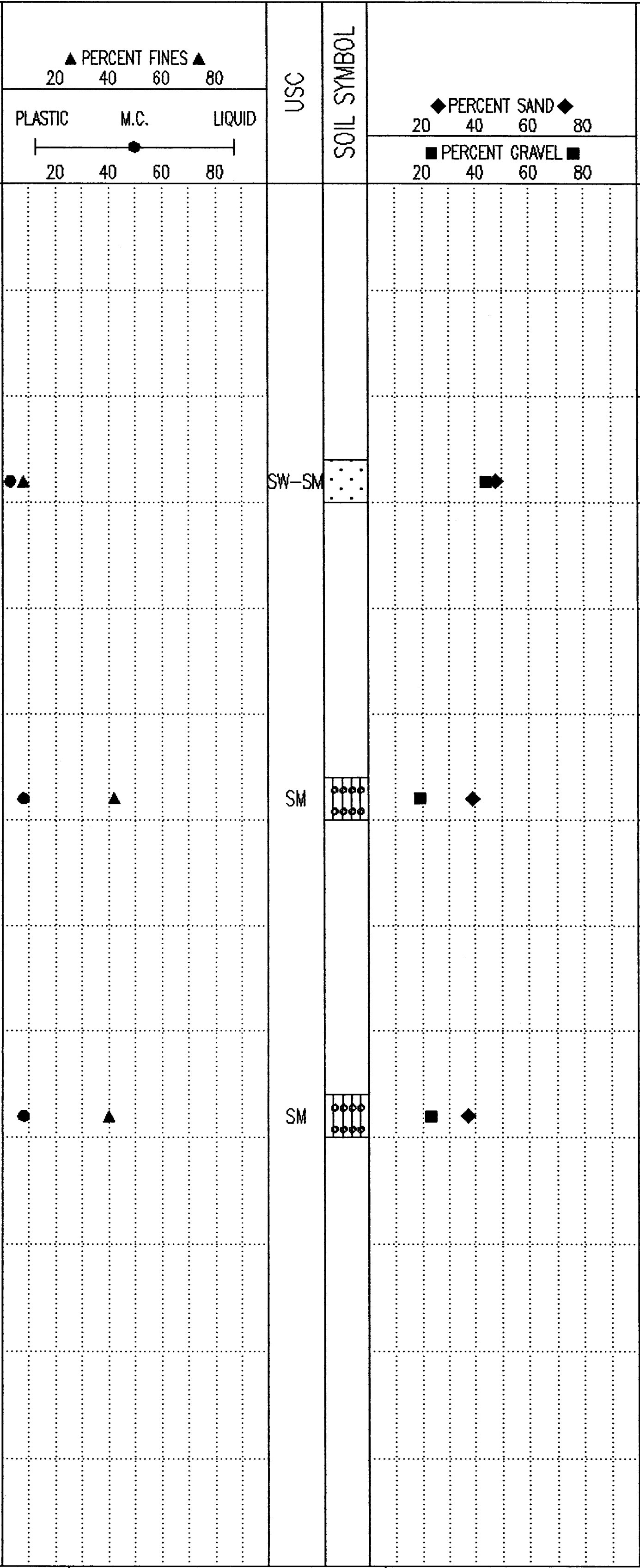
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-296
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1742+101 11.1M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC	DEPTH (m)
0.0	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -brown -moist -maximum 75mm material augered up -noisy grindy drilling				0.0
1.0					1.0
		☒	493	SW-SM	
2.0	SILTY SAND WITH GRAVEL (SM) -grey -moist -smoother easier drilling				2.0
		☒	494	SM	
3.0					3.0
4.0	-damp to moist below 3.8m				4.0
		☒	495	SM	
	END HOLE @ 4.5m				
5.0					5.0
6.0					6.0



Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/07/30
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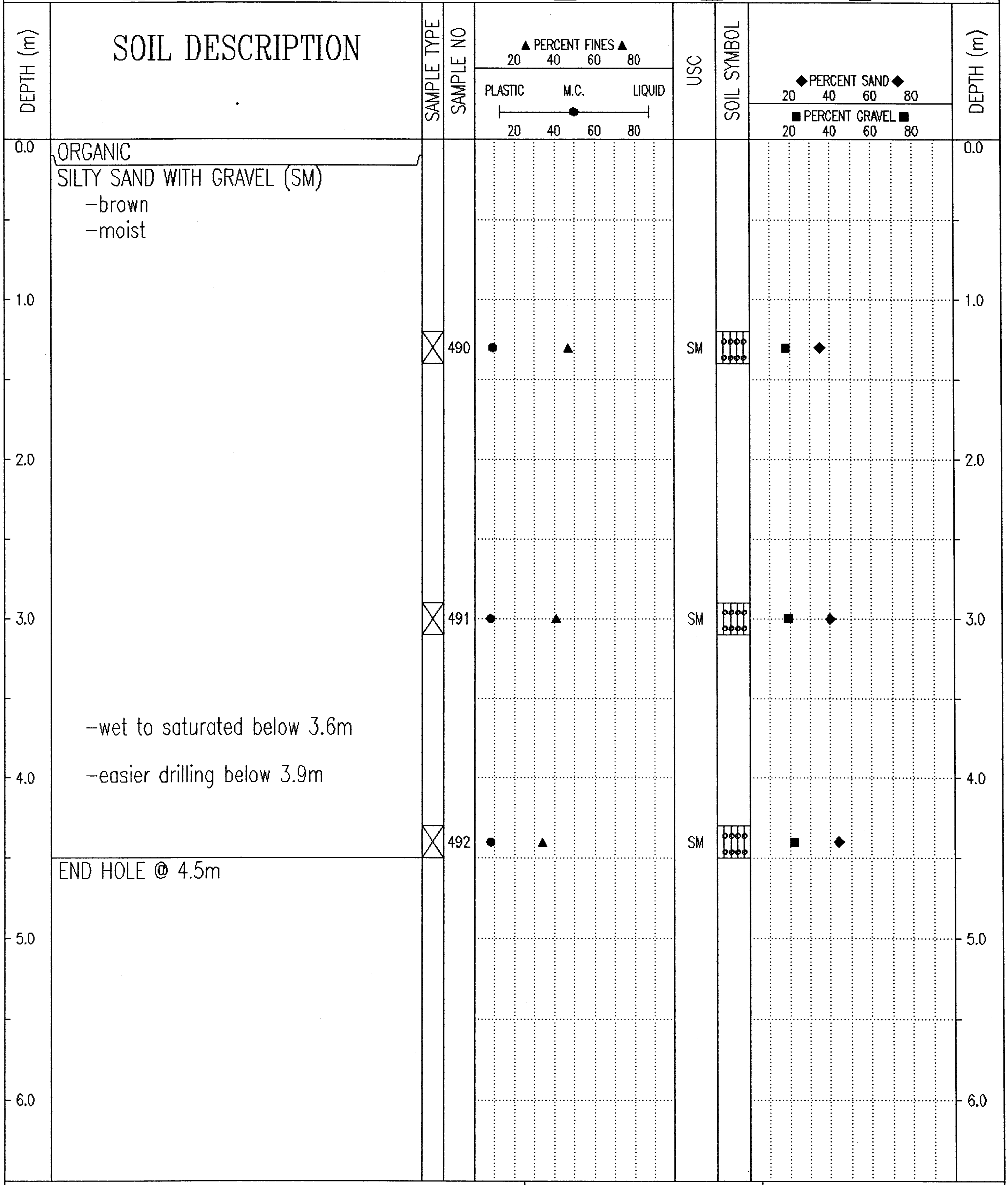
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-295
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1742+199 6.2M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◸ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



ORGANIC

SILTY SAND WITH GRAVEL (SM)

-brown

-moist

-wet to saturated below 3.6m

-easier drilling below 3.9m

END HOLE @ 4.5m

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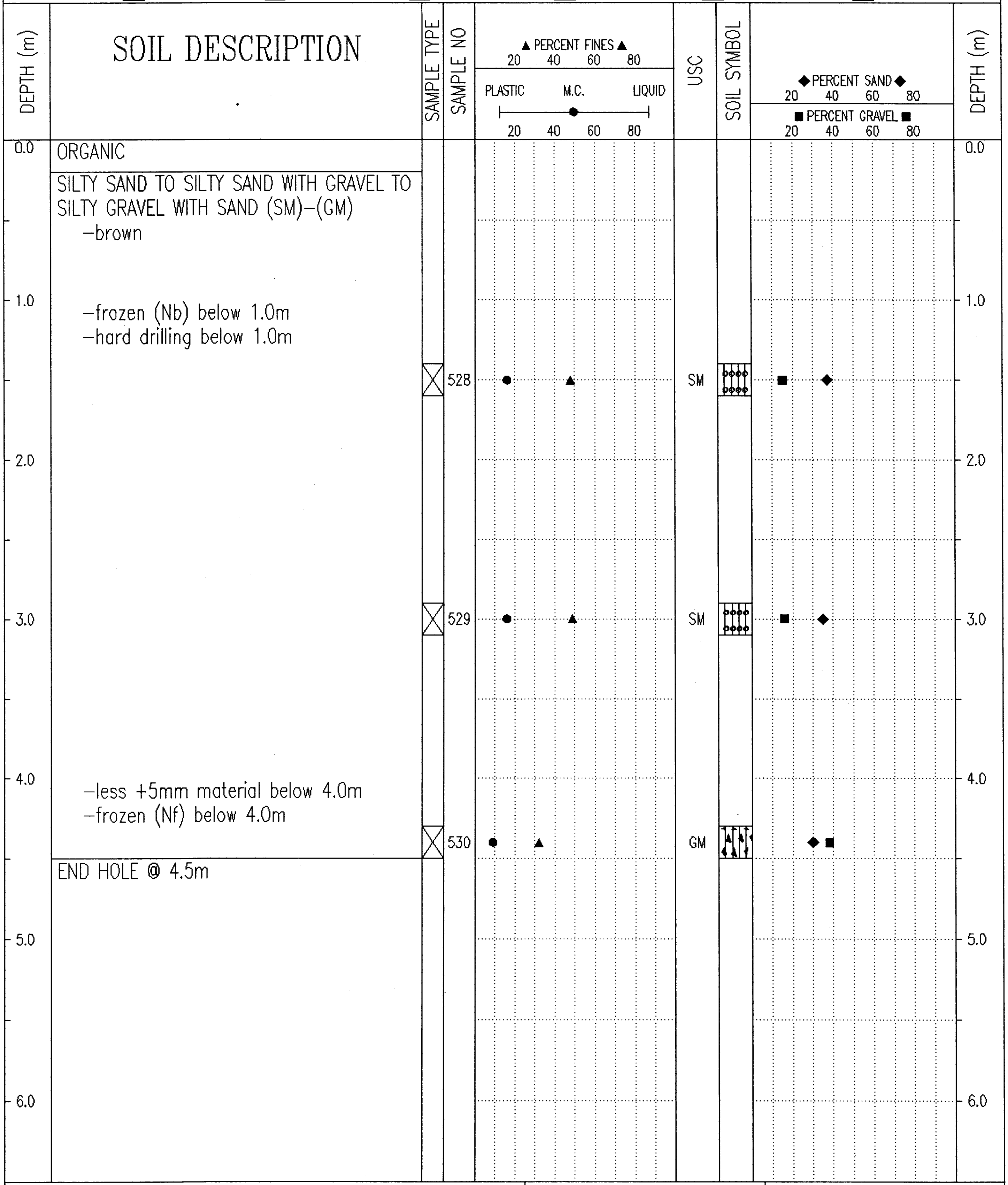
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-312
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1742+200 20M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▌ CORE



Depth (m)	Soil description	Sample no	USC
0.0	ORGANIC		
	SILTY SAND TO SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM) -brown -frozen (Nb) below 1.0m -hard drilling below 1.0m	528	SM
		529	SM
	-less +5mm material below 4.0m -frozen (Nf) below 4.0m	530	GM
4.5	END HOLE @ 4.5m		

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.5 m
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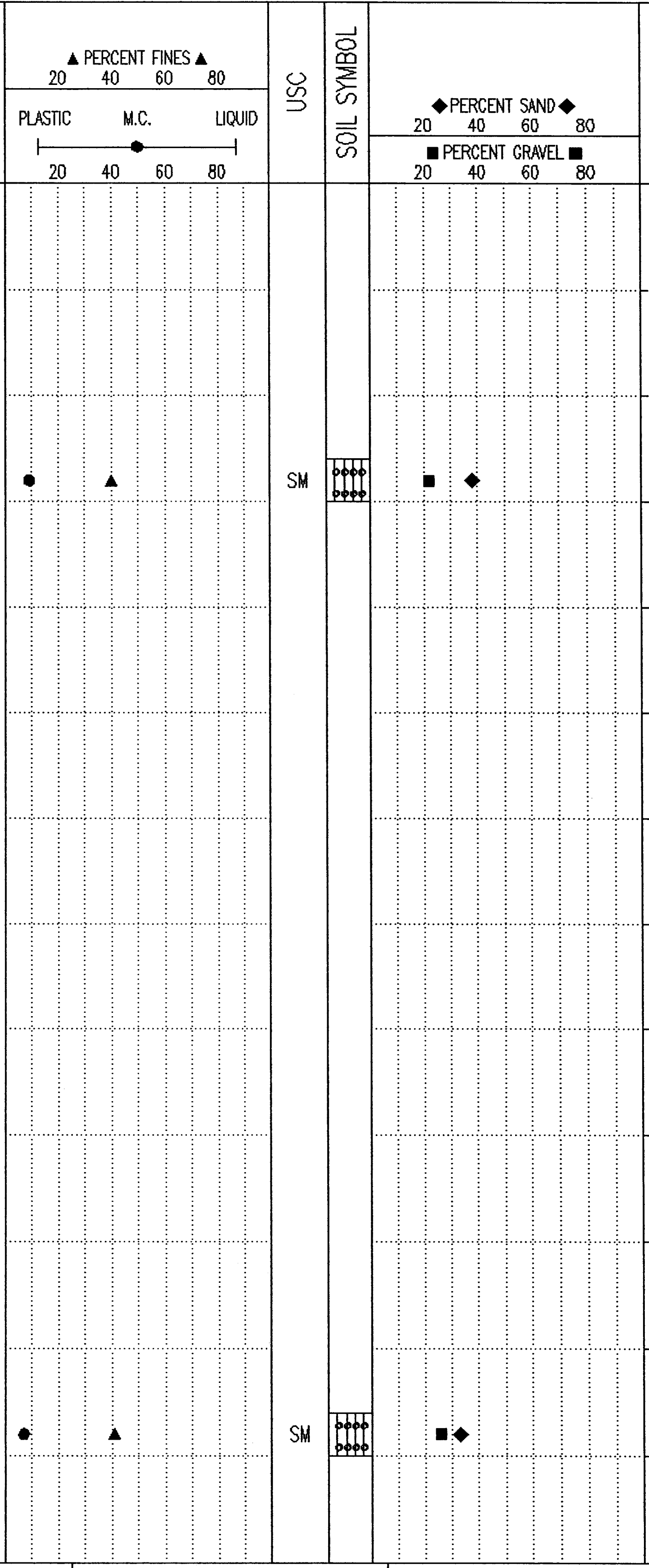
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611–294
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092–202101–0361
B40–L DRILL 6"AUGERS	LOCATION:1742+275 23.5M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC			
	SILTY SAND WITH GRAVEL (SM) –brown –wet to saturated –grindy drilling			
1.0				
		☒	488	SM
2.0				
3.0				
	–difficult jumpy grindy drilling below 3.4m			
4.0				
5.0	–grey below 5.0m –moist below 5.0m			
		☒	489	SM
6.0	END HOLE @ 6.0m			



Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 6.0 m
	REVIEWED BY:	COMPLETE: 01/07/27
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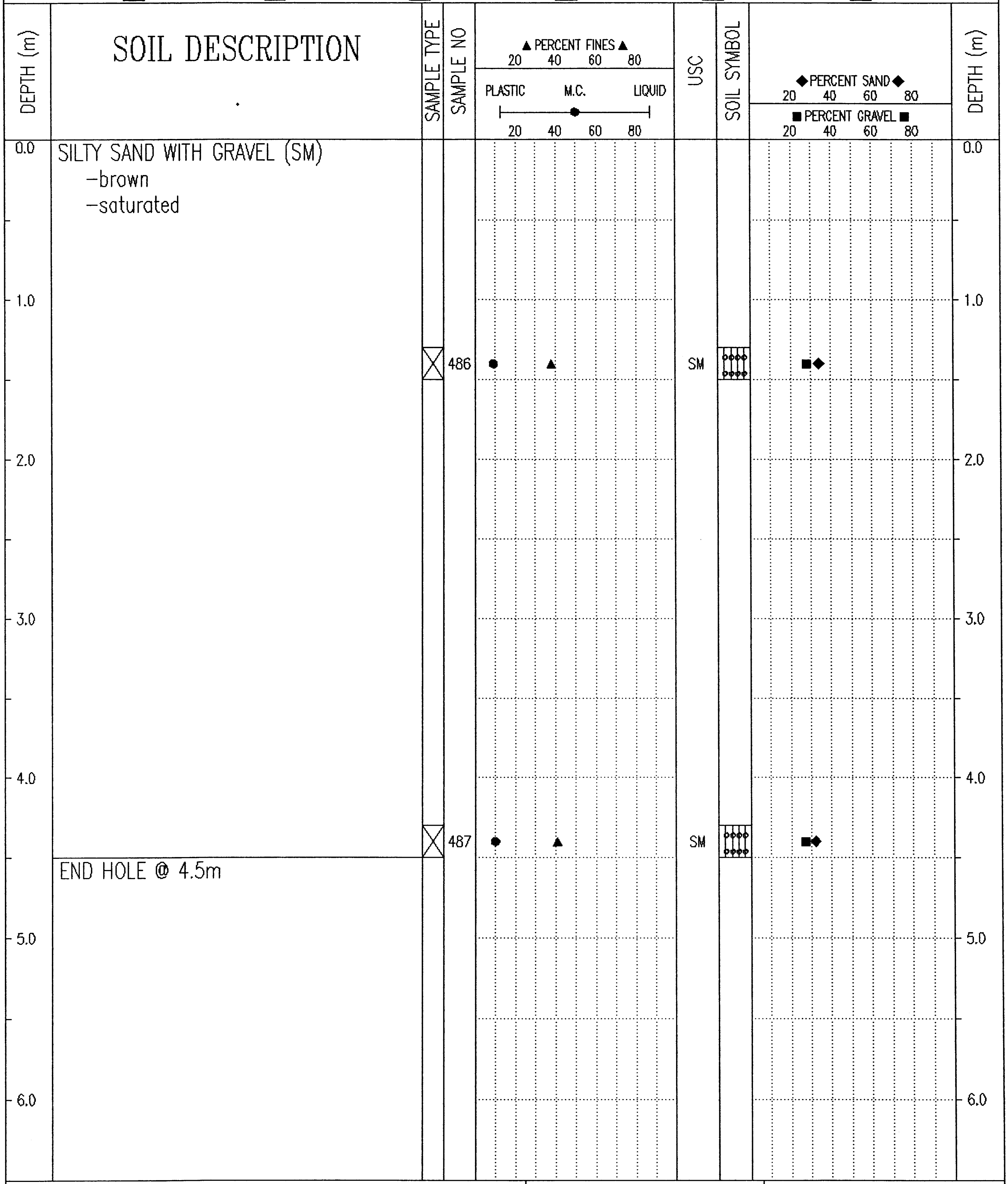
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-293
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1742+359 17.4M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



SILTY SAND WITH GRAVEL (SM)
-brown
-saturated

END HOLE @ 4.5m

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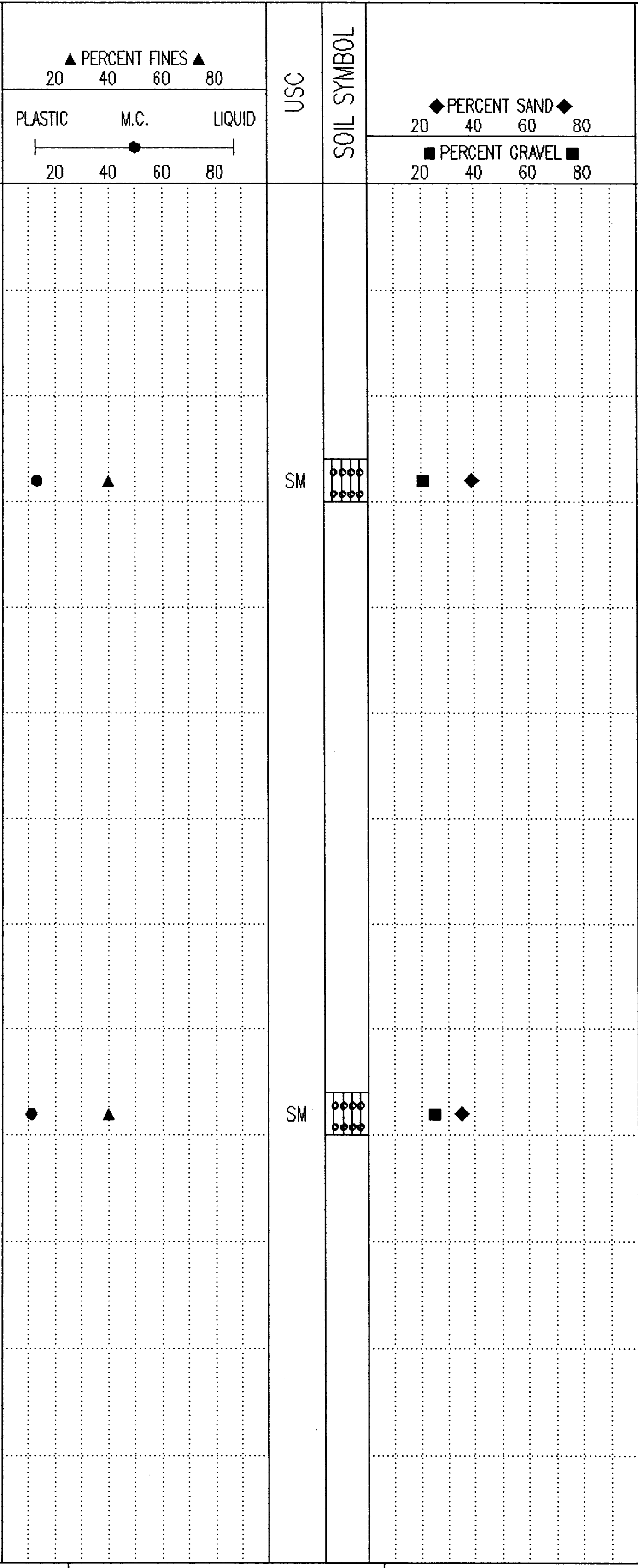
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-313
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1742+400 15M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC			
	SILTY SAND WITH GRAVEL (SM) -brown -saturated			
		☒	531	SM
4.0	-grey below 4.0m			
		☒	532	SM
	END HOLE @ 4.5m			



DEPTH (m): 0.0, 1.0, 2.0, 3.0, 4.0, 5.0, 6.0

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	REVIEWED BY:	COMPLETE: 01/07/31
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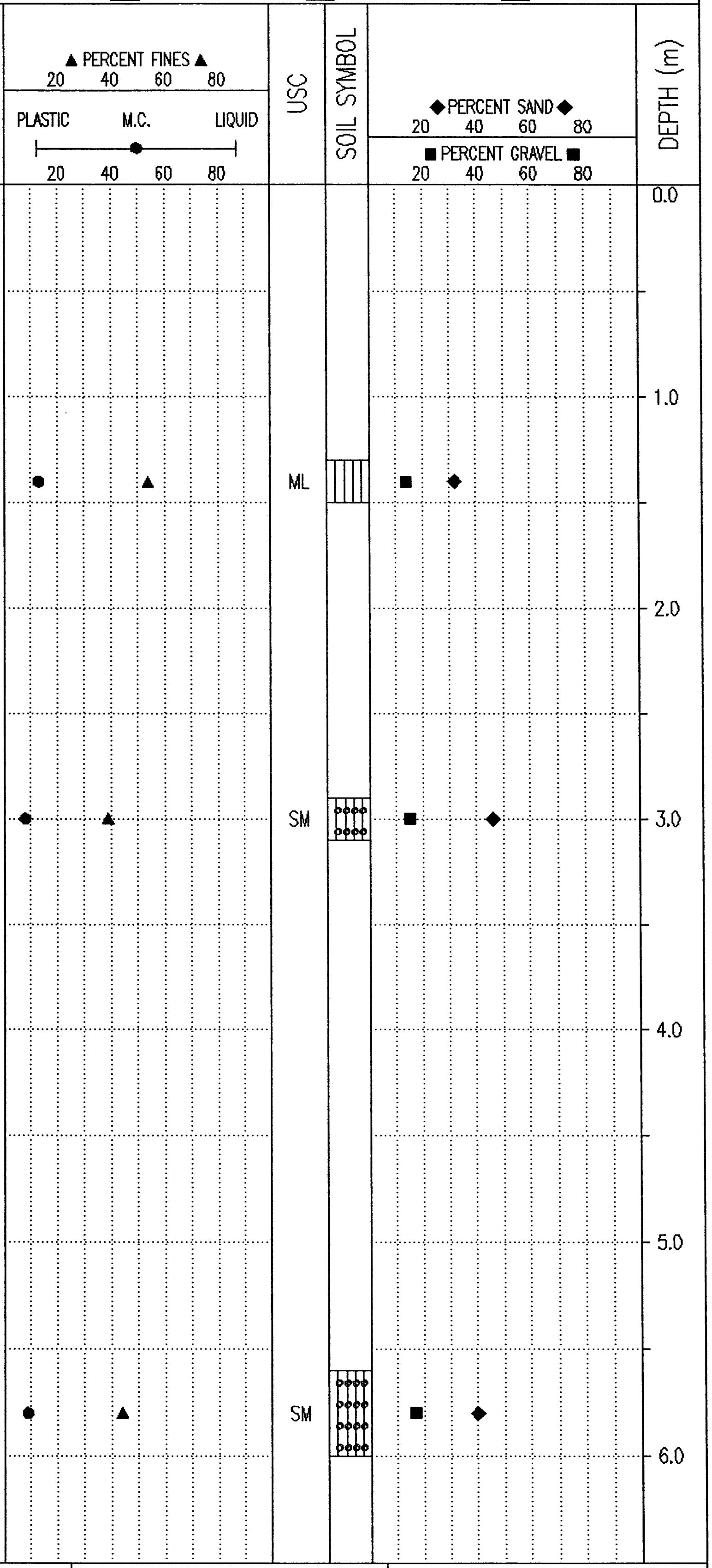
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-292
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1742+452 20.6M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

SOIL DESCRIPTION

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	CRUSHED GRAVEL			
	SANDY SILT TO SILTY SAND TO SILTY SAND WITH GRAVEL (ML)-(SM) -brown -moist			
1.4		☒	483	ML
3.0		☒	484	SM
5.0	-grey- brown below 5.0m -saturated below 5.0m			
5.8		☒	485	SM
6.0	END HOLE @ 6.0M Note: Test hole in old pit.			



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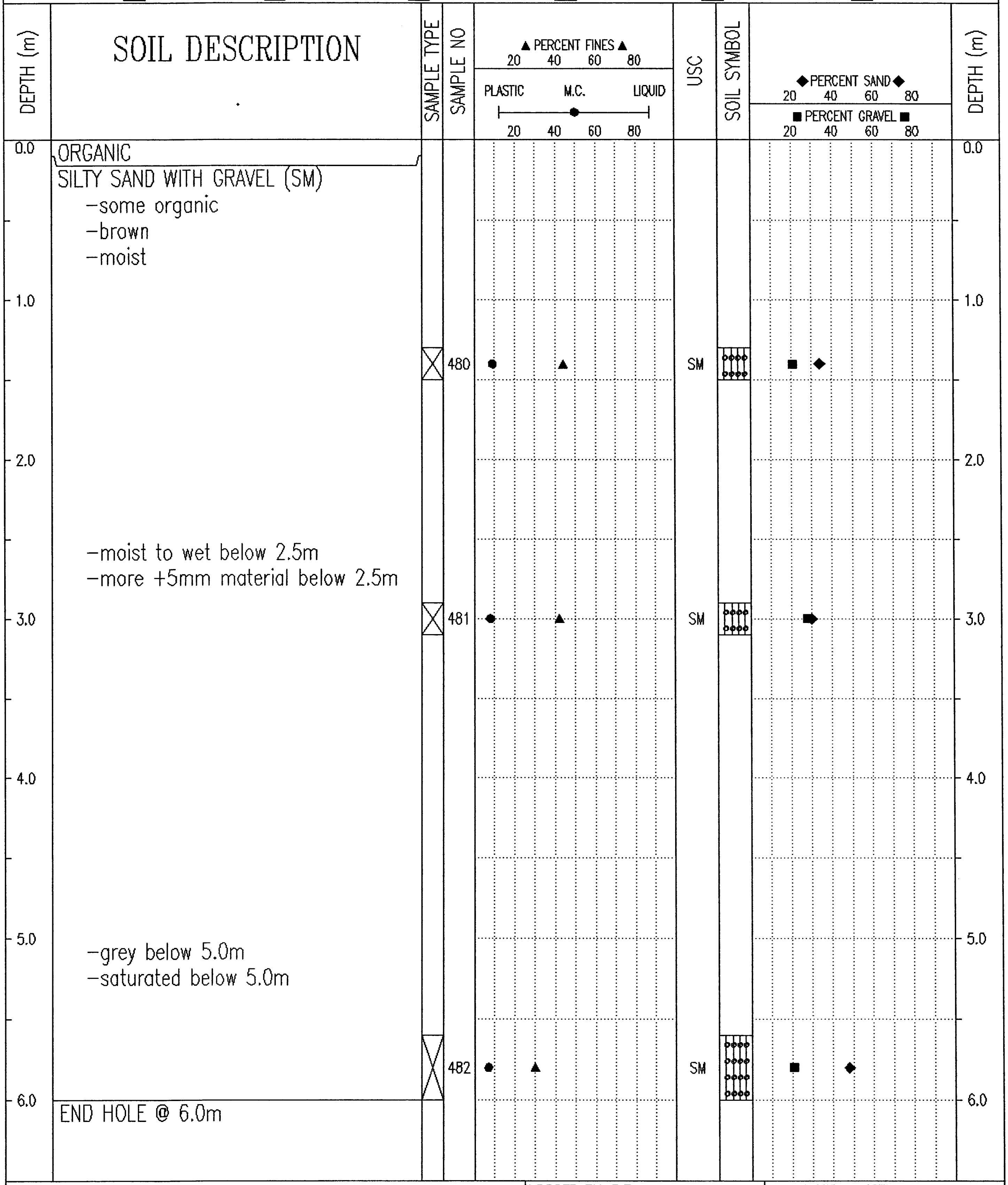
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-291
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1742+552 14.6M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



ORGANIC

SILTY SAND WITH GRAVEL (SM)
- some organic
- brown
- moist

- moist to wet below 2.5m
- more +5mm material below 2.5m

- grey below 5.0m
- saturated below 5.0m

END HOLE @ 6.0m

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 6.0 m
	REVIEWED BY:	COMPLETE: 01/07/27
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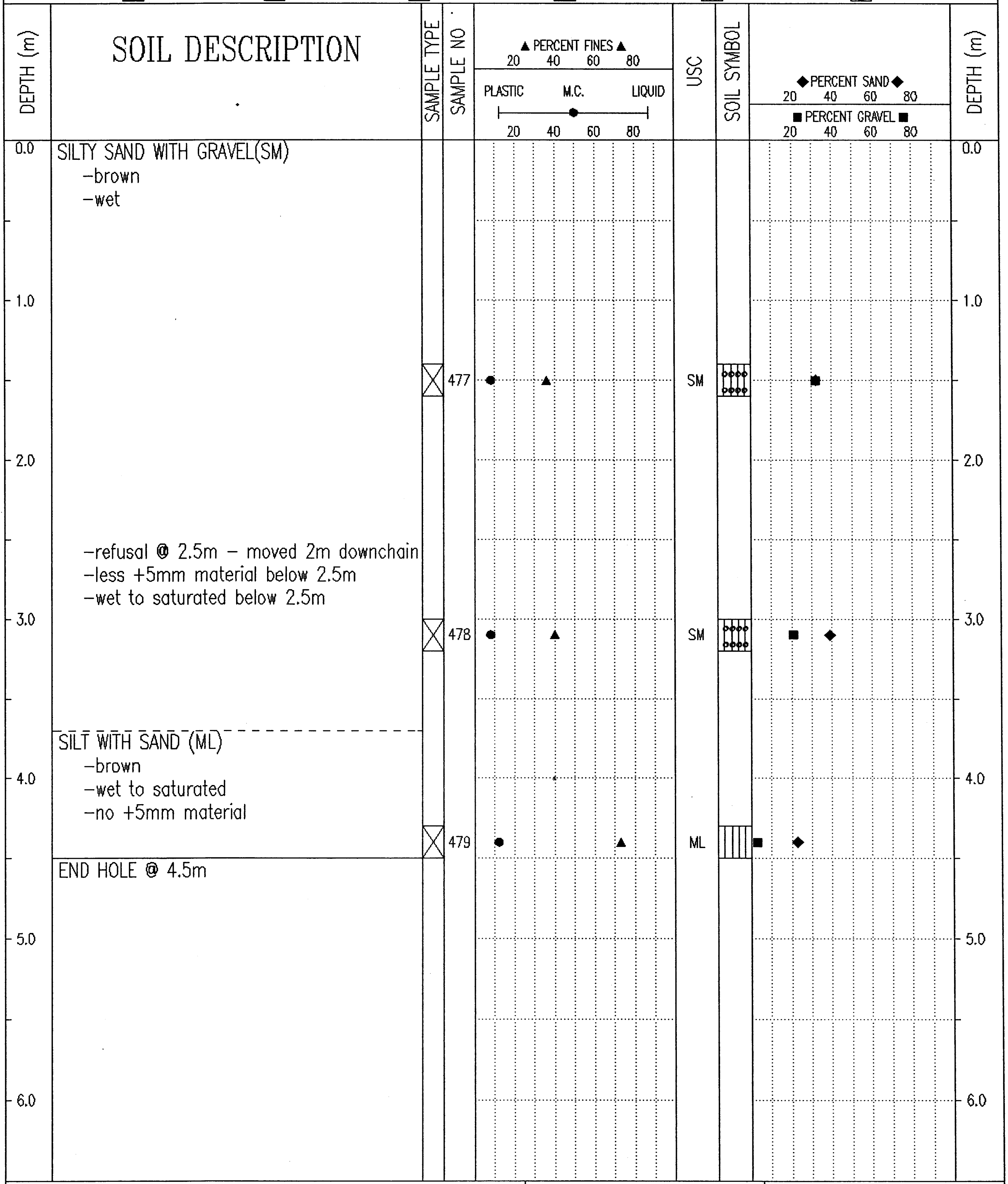
SUBSURFACE EXPLORATION & TESTING REPORT
SEG 11
TEST HOLE NO: 611-290
ENGINEERING CAPITAL
ROW TESTING A/H
Project No: 092-202101-0361
B40-L DRILL 6"AUGERS
LOCATION:1742+621 18.1M LT
ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◩ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SILTY SAND WITH GRAVEL(SM)
- brown
- wet

- refusal @ 2.5m – moved 2m downchain
- less +5mm material below 2.5m
- wet to saturated below 2.5m

SILT WITH SAND (ML)
- brown
- wet to saturated
- no +5mm material

END HOLE @ 4.5m

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LOGGED BY: D.T.
REVIEWED BY:
Fig. No:
COMPLETION DEPTH: 4.5 m
COMPLETE: 01/07/27
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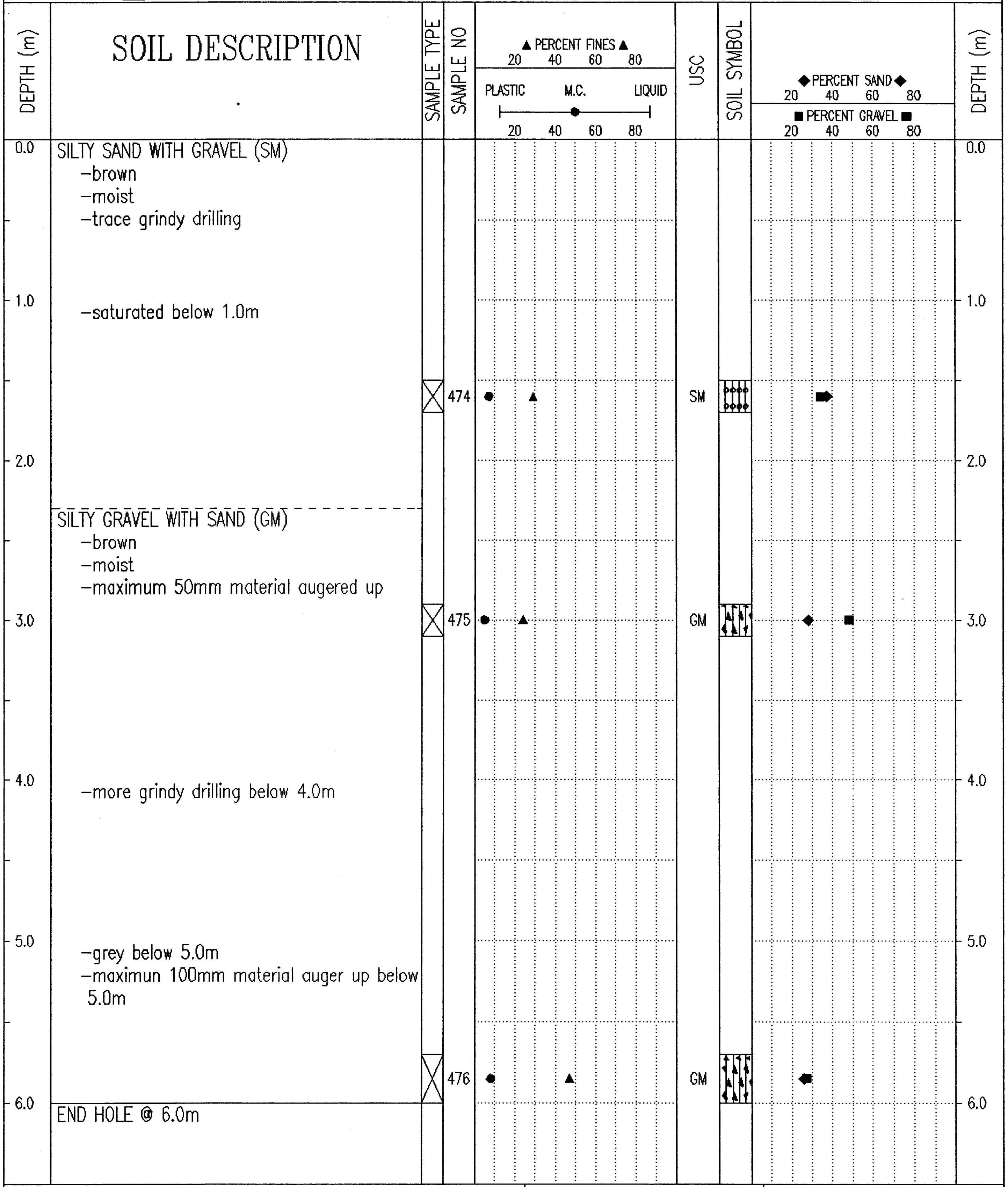
SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-289
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1742+709 20.3 LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SOIL DESCRIPTION

0.0 SILTY SAND WITH GRAVEL (SM)
- brown
- moist
- trace grindy drilling
- saturated below 1.0m

SILTY GRAVEL WITH SAND (GM)
- brown
- moist
- maximum 50mm material augered up
- more grindy drilling below 4.0m
- grey below 5.0m
- maximun 100mm material auger up below 5.0m

END HOLE @ 6.0m

SAMPLE TYPE	SAMPLE NO	USC
☒	474	SM
☒	475	GM
☒	476	GM

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 6.0 m
	REVIEWED BY:	COMPLETE: 01/07/27
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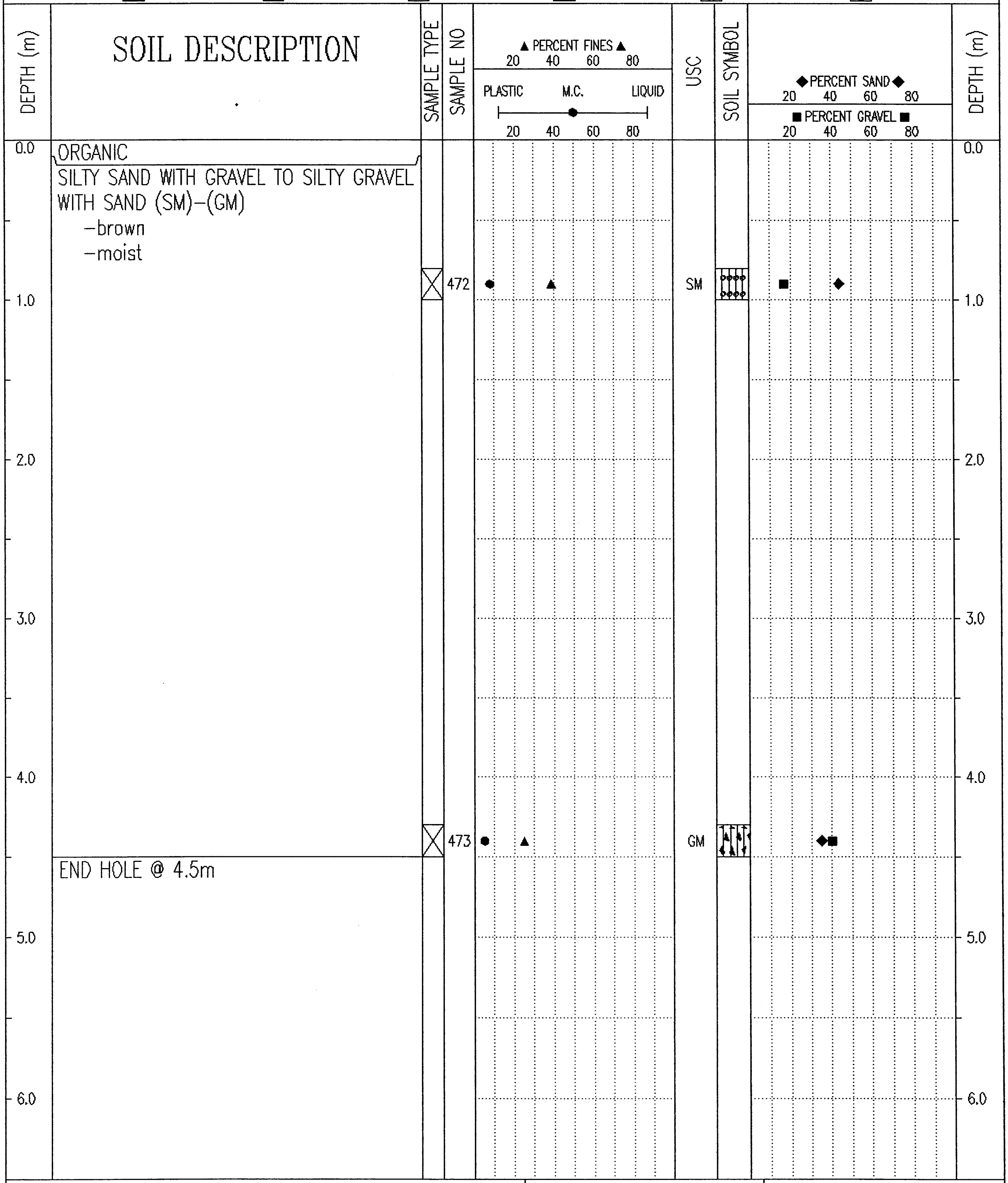
02/02/14 10:50AM

SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-288
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1742+782 6.7M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



ORGANIC

SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM)

- -brown
- -moist

END HOLE @ 4.5m

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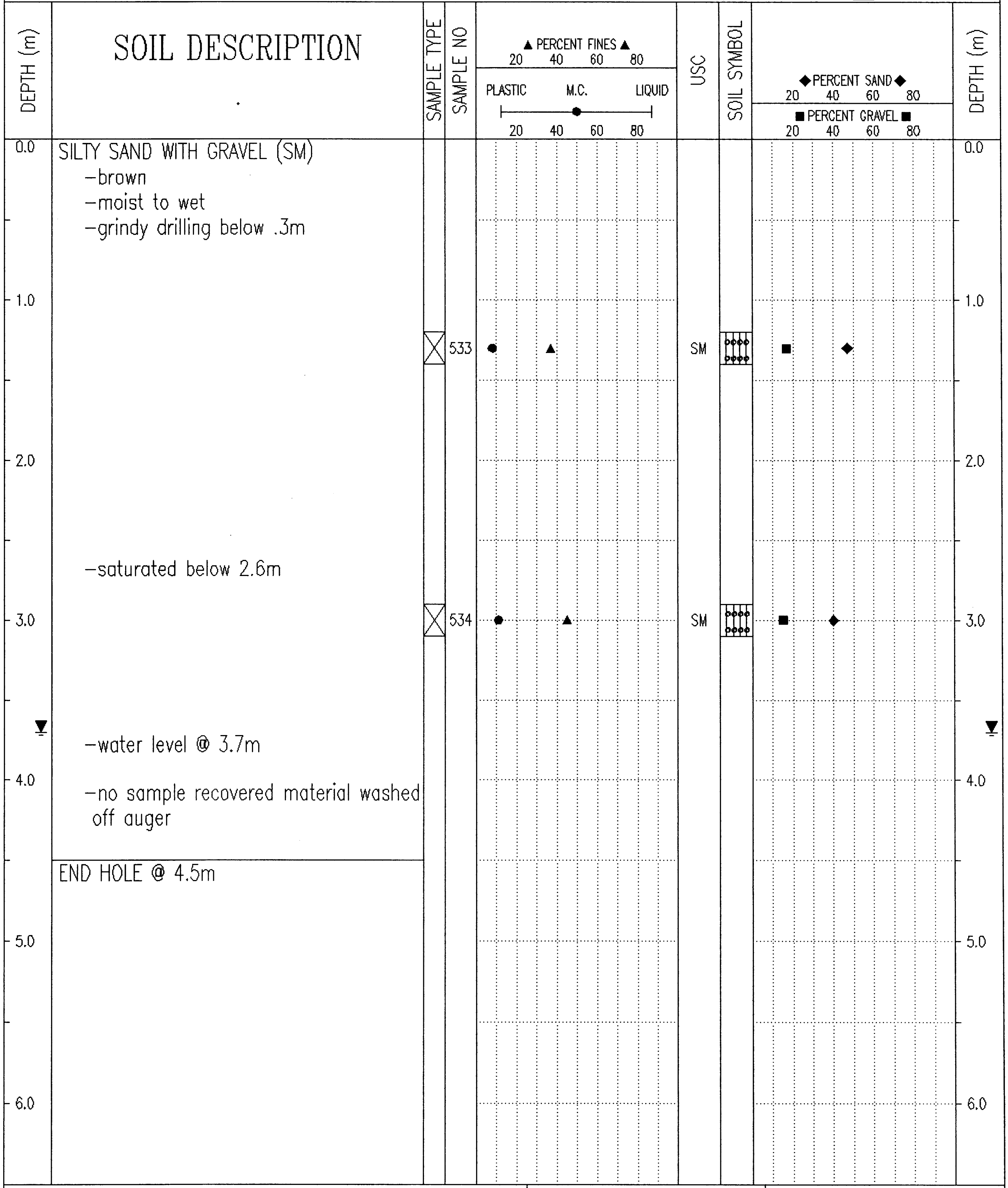
REVIEWED BY:	COMPLETE: 01/07/27
Fig. No:	Page 1 of 1

02/02/14 11:09AM

SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-314
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1742+832 25M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



SILTY SAND WITH GRAVEL (SM)
- brown
- moist to wet
- grindy drilling below .3m
- saturated below 2.6m
- water level @ 3.7m
- no sample recovered material washed off auger

END HOLE @ 4.5m

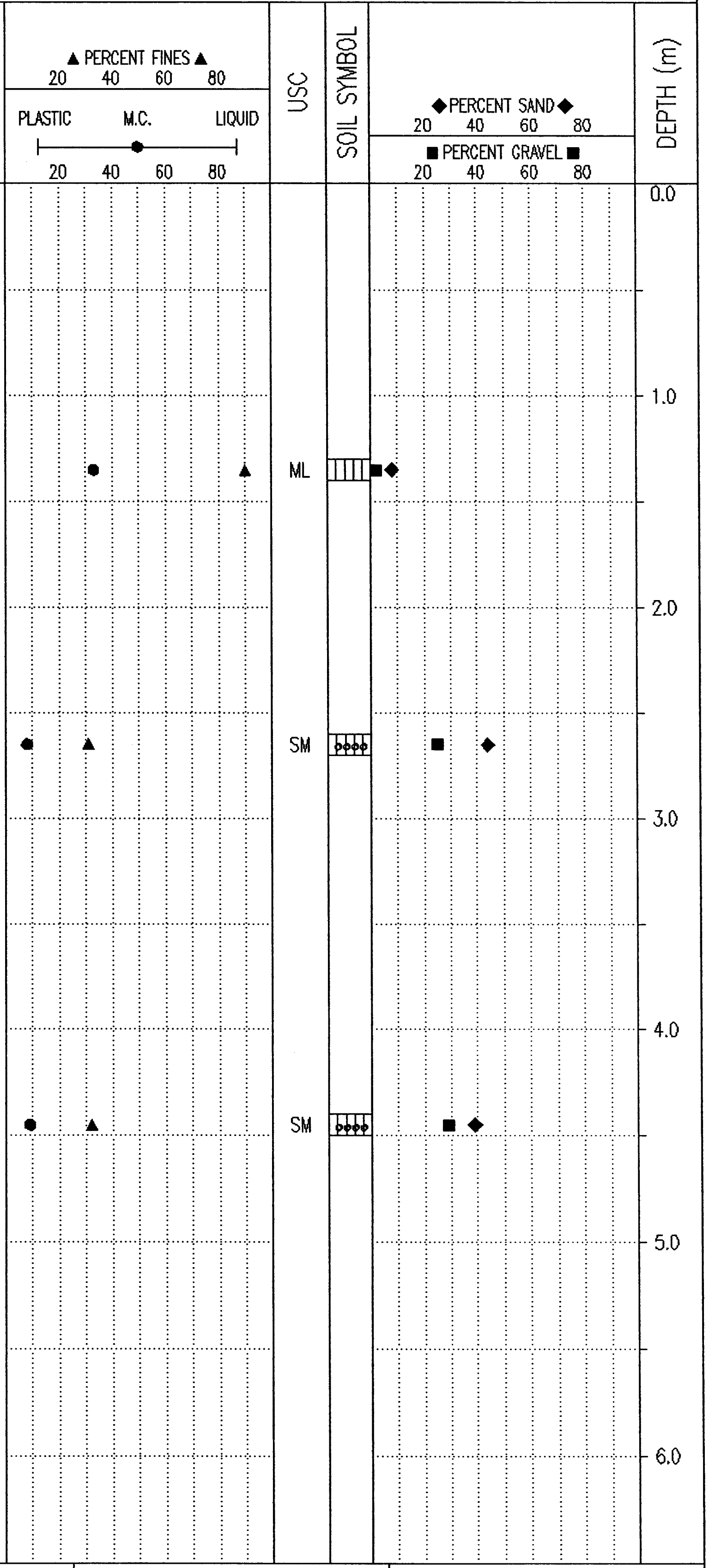
Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/07/31
	Fig. No:	Page 1 of 1

02/01/28 01:50PM

SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST HOLE NO: 611-287
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1742+837 20M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ROAD GRAVEL			
	SILTY ORGANIC (ML) -trace sand -black / brown -satuated	☒	469	ML
	SILTY SAND WITH GRAVEL (SM) -brown -wet -grindy drilling -saturated below 3.5m	☒ ☒	470 471	SM SM
	END HOLE @ 4.5m			



Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/07/27
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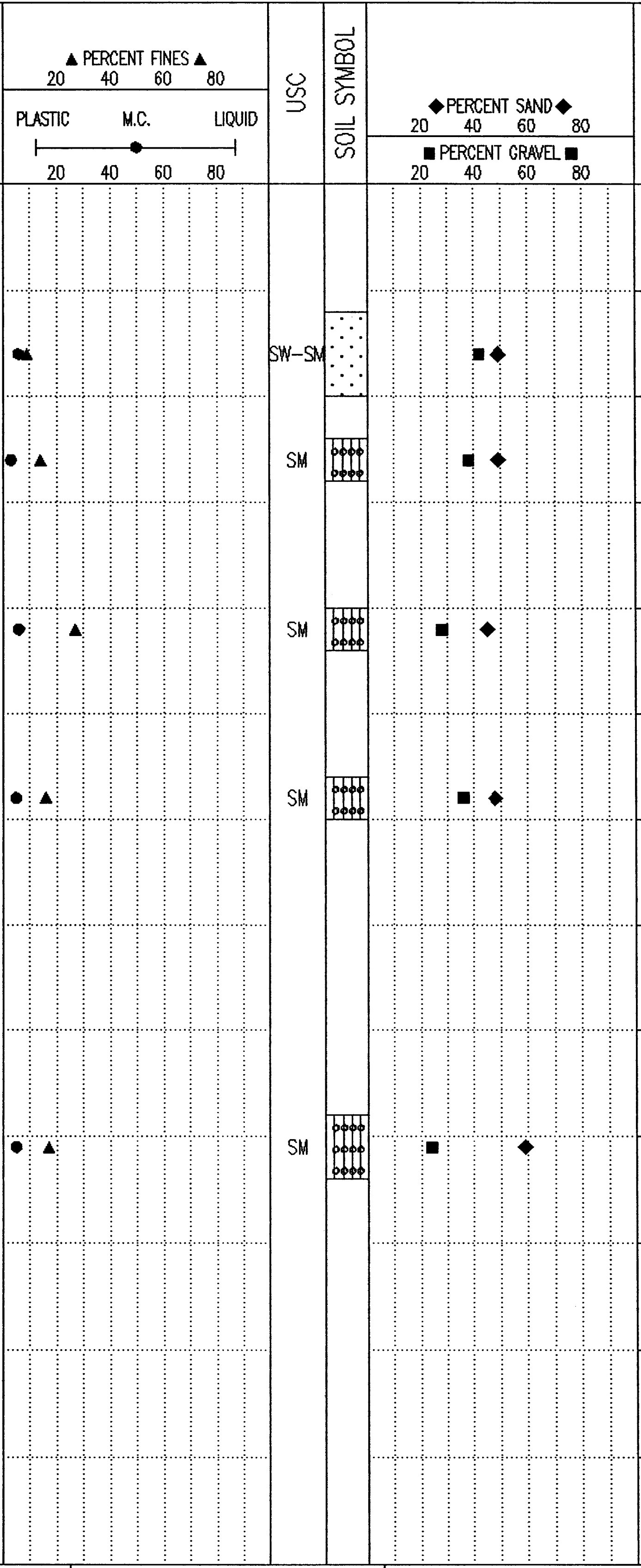
02/02/14 10:50AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1292
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1742+920 12.5M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	CRUSHED WELL-GRADED SAND WITH SILT & GRAVEL - ROAD AGGREGATE (SW-SM) -grey -moist			
		☒	1	SW-SM
1.0	SILTY SAND WITH GRAVEL (SM) -dry -easy drilling			
		☒	2	SM
	-0.1m silt seam @ 1.8m			
2.0		☒	3	SM
		☒	4	SM
3.0				
4.0	-grey below 4.0m -damp below 4.0m -more rocks @ 4.0m			
		☒	5	SM
	END HOLE @ 4.7m Note: Test hole is 10m upchain of Destruction Bay Maint. entrance -Area was previously stripped - no organic on surface.			
5.0				
6.0				



Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/04/26
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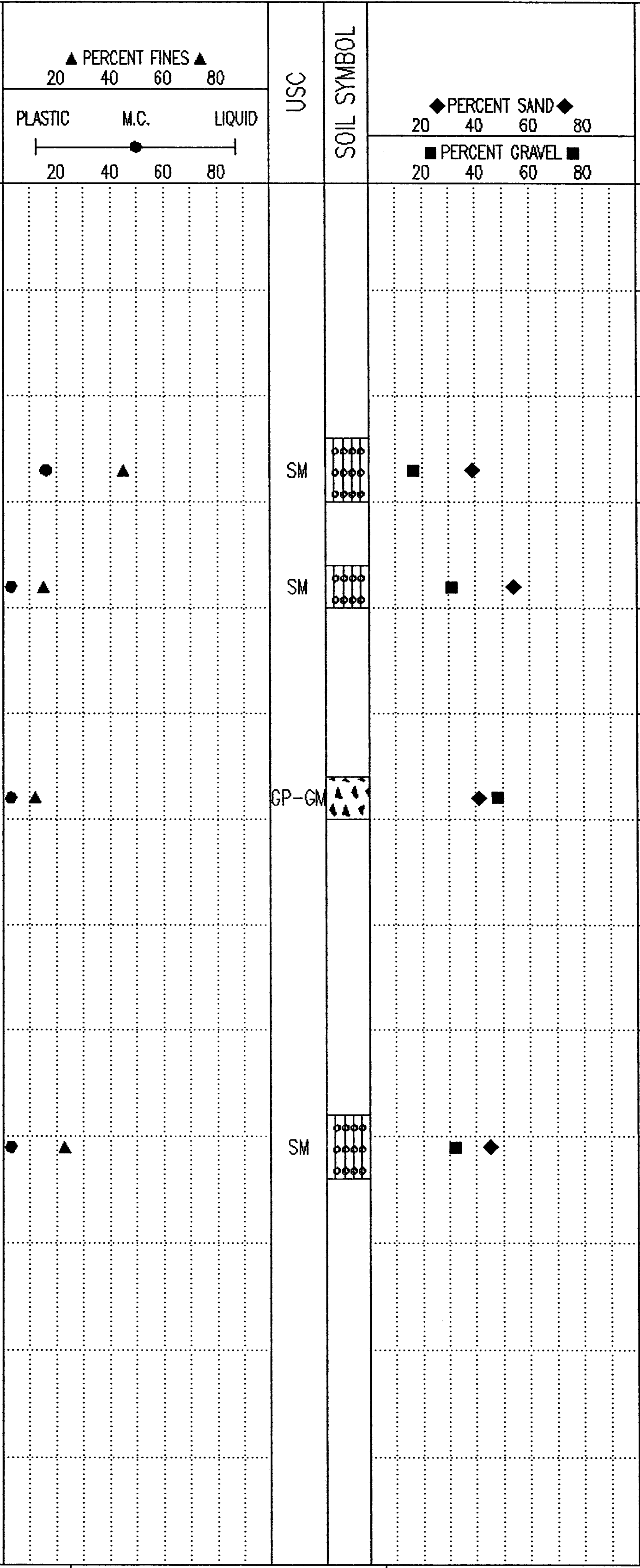
02/02/15 08:43AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1293
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1742+999 21.8M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	SILTY CRUSH			
1.0	SILTY SAND WITH GRAVEL (SM) -damp – frozen -more rocks	☒	6	SM
	-grey below 1.7m -easier drilling below 1.7m	☒	7	SM
2.6	POORLY GRADED GRAVEL WITH SILT & SAND TO SILTY SAND WITH GRAVEL (GP-GM)-(SM) -damp -grey	☒	8	GP-GM
		☒	9	SM
4.7	END HOLE @ 4.7m Note: Wood culvert 10m upchain from hole Test hole 15m lt of centreline due to power line.			



DEPTH (m): 0.0 1.0 2.0 3.0 4.0 5.0 6.0

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/04/26
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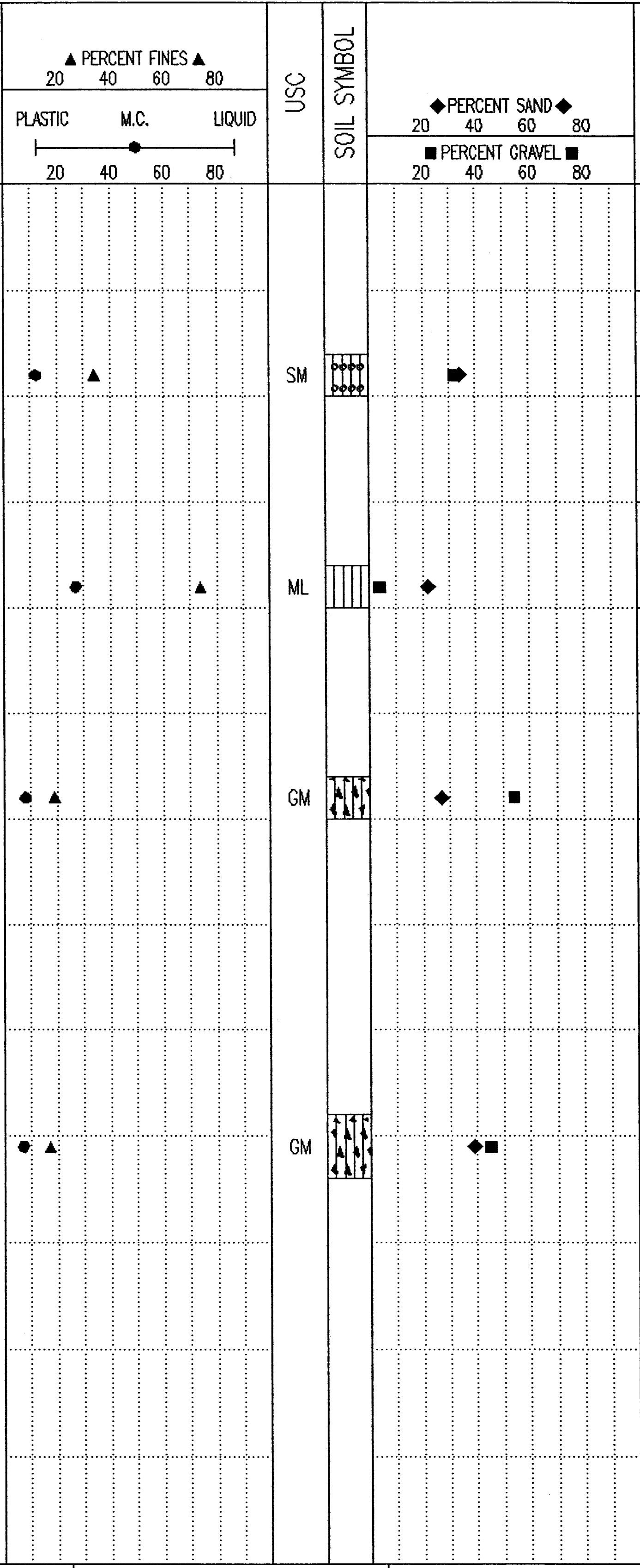
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 542-1329
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1743+011 13.5m RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ◨ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC			
	SILTY SAND WITH GRAVEL TO SILT WITH SAND (SM)-(ML) -grey -damp			
1.0		☒	145	SM
2.0		☒	146	ML
	SILTY GRAVEL WITH SAND (GM) -grey -damp to moist			
3.0		☒	147	GM
4.0				
		☒	148	GM
5.0	END HOLE @ 4.7m Note: CPS Multiplate - Outlet 3m upchain of existing channel Buried Telephone line 8m rt of centreline			
6.0				



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LOGGED BY: G.C.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/05/04
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1294
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1743+117 19.8M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▌ CORE

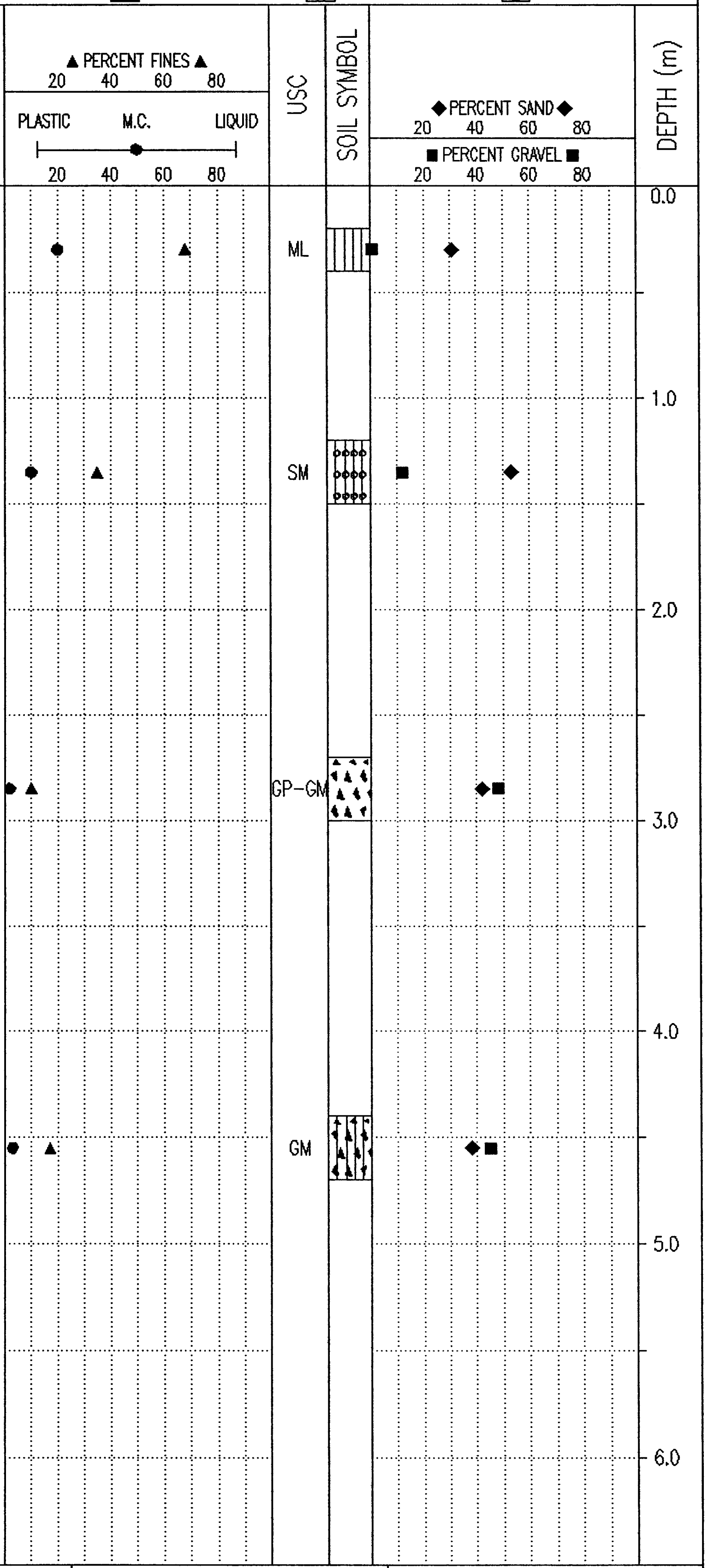
SOIL DESCRIPTION

0.0 SANDY SILT (ML)
- -organic
- -frozen
- -brown

SILTY SAND TO POORLY GRADED GRAVEL WITH SILT & SAND TO SILTY GRAVEL WITH SAND (SM)-(GP-GM)-(GM)
- -grey
- -damp
- -angular
- -easy drilling
- -more rocks @ 1.5m
- -changed bitt @ 3.0m

END HOLE @ 4.7m
Note: Test hole located downchain access to Talbot Arms Hotel.

SAMPLE NO	USC
10	ML
11	SM
12	GP-GM
13	GM



Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/04/26
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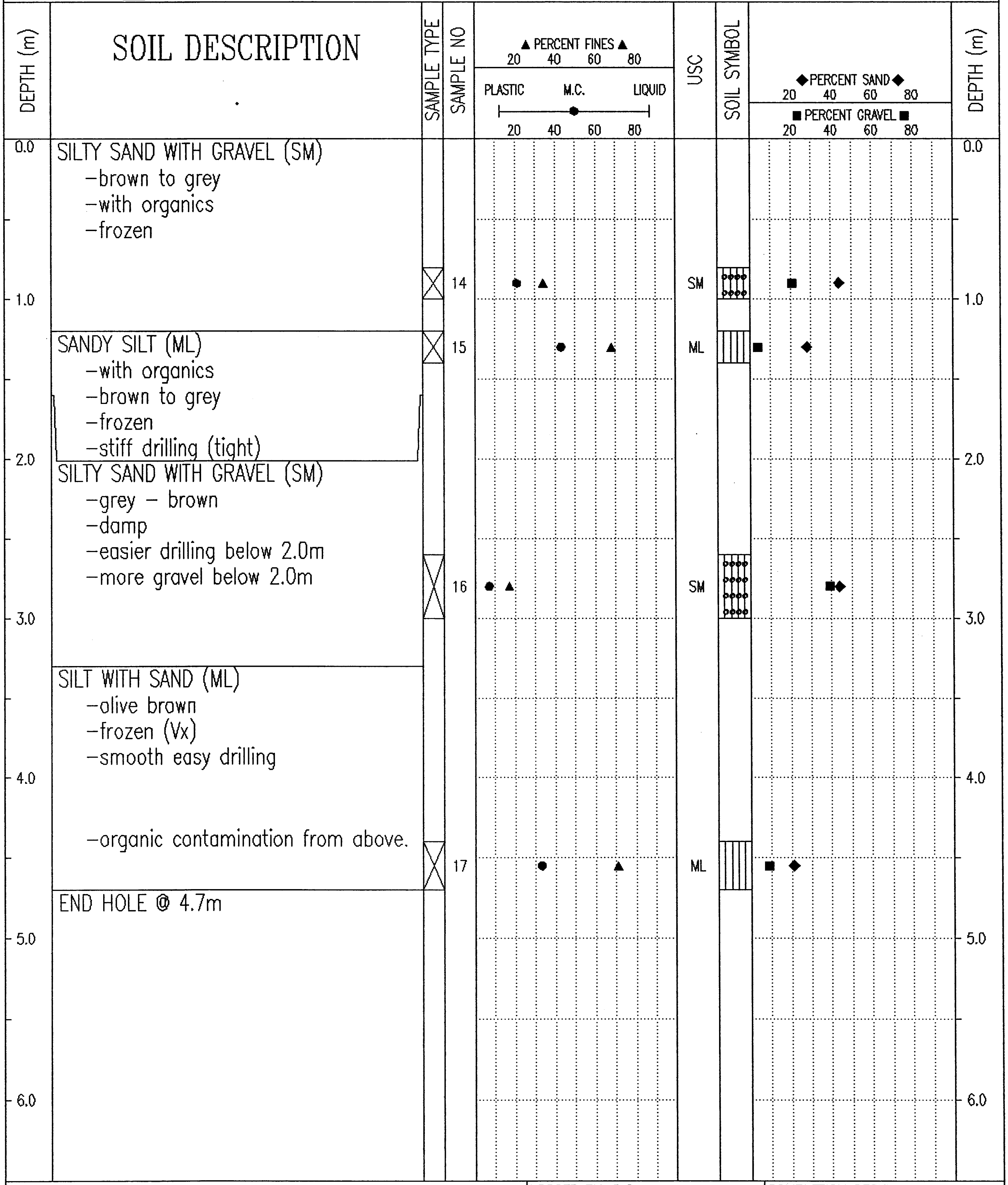
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1295
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1743+205M 13M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SILTY SAND WITH GRAVEL (SM)
-brown to grey
-with organics
-frozen

SANDY SILT (ML)
-with organics
-brown to grey
-frozen
-stiff drilling (tight)

SILTY SAND WITH GRAVEL (SM)
-grey - brown
-damp
-easier drilling below 2.0m
-more gravel below 2.0m

SILT WITH SAND (ML)
-olive brown
-frozen (Vx)
-smooth easy drilling

-organic contamination from above.

END HOLE @ 4.7m

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	REVIEWED BY:	COMPLETE: 00/04/26
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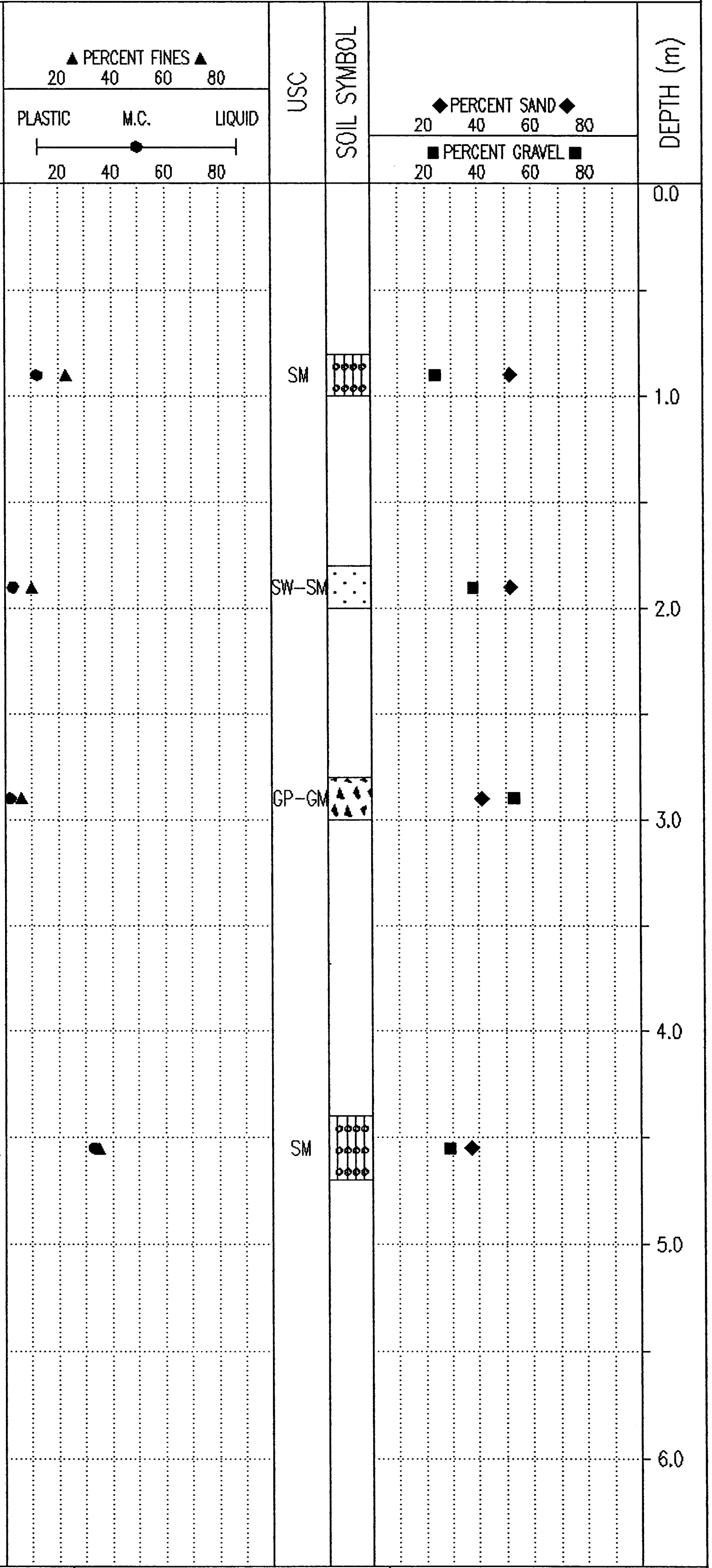
02/02/19 10:48AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 542-1330
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1743+249 16.0M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◺ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	SILTY SAND WITH GRAVEL (SM) -no organics – previously stripped -grey -damp			
		☒	149	SM
1.0				
	WELL-GRADED SAND WITH SILTY & GRAVEL TO POORLY GRADED GRAVEL WITH SILT & SAND (SW-SM)-(GP-GM) -grey -damp -more rocks	☒	150	SW-SM
2.0				
		☒	151	GP-GM
3.0	SILTY SAND WITH GRAVEL (SM) -with organics -grey – brown -moist -smoother drilling			
4.0		☒	152	SM
	END HOLE @ 4.7m CPS Outlet – 5m downchain Note: 3/4 plastic waterline 1.0m right of Testhole 1330 (surface)			
5.0				
6.0				



Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/04
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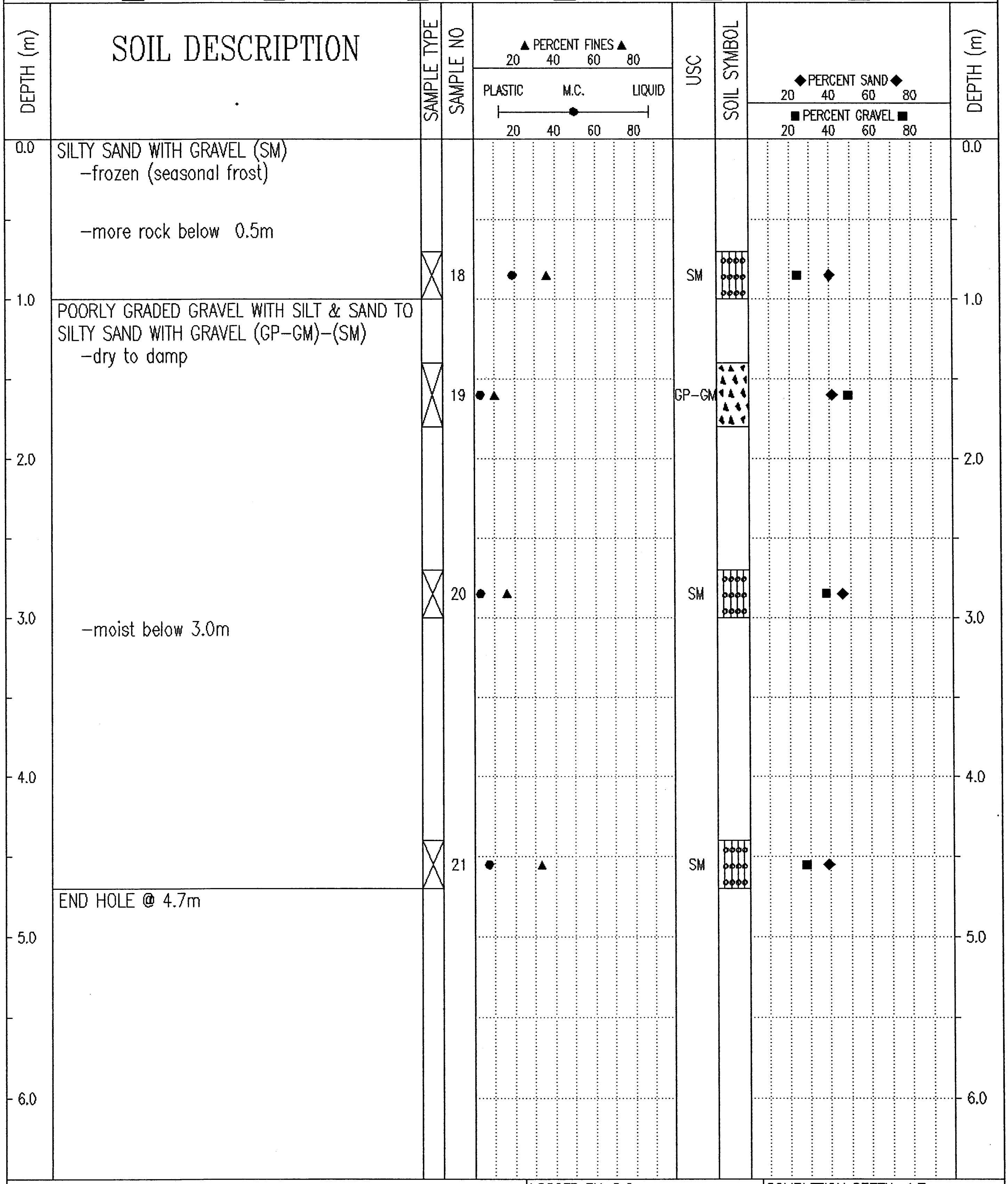
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1296
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1743+271 11.9M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◸ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SILTY SAND WITH GRAVEL (SM)
-frozen (seasonal frost)

-more rock below 0.5m

POORLY GRADED GRAVEL WITH SILT & SAND TO SILTY SAND WITH GRAVEL (GP-GM)-(SM)
-dry to damp

-moist below 3.0m

END HOLE @ 4.7m

SAMPLE NO	USC
18	SM
19	GP-GM
20	SM
21	SM

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	REVIEWED BY:	COMPLETE: 00/04/26
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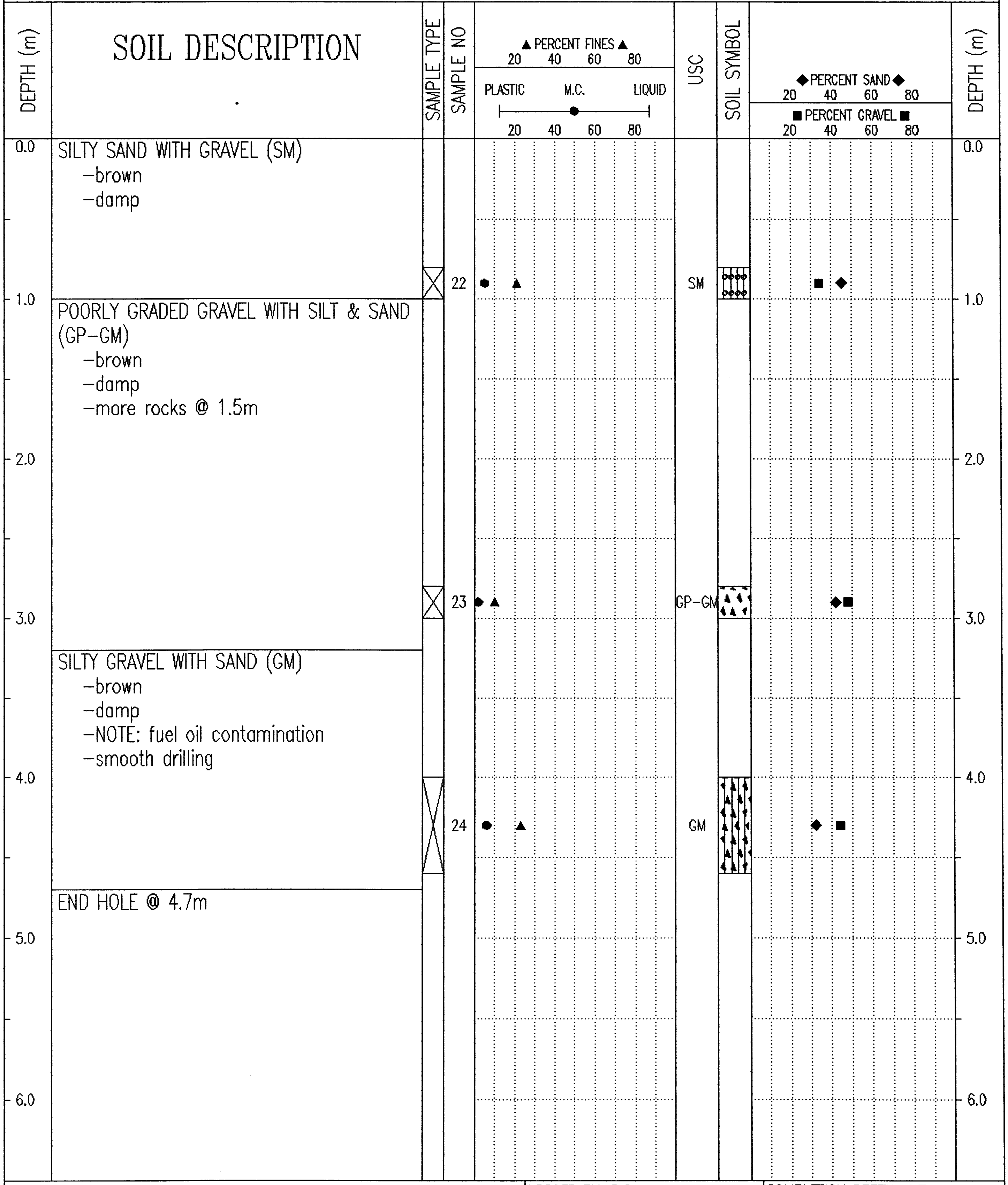
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1297
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1743+373 14M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SOIL DESCRIPTION

SILTY SAND WITH GRAVEL (SM)
- brown
- damp

POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)
- brown
- damp
- more rocks @ 1.5m

SILTY GRAVEL WITH SAND (GM)
- brown
- damp
- NOTE: fuel oil contamination
- smooth drilling

END HOLE @ 4.7m

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	REVIEWED BY:	COMPLETE: 00/04/26
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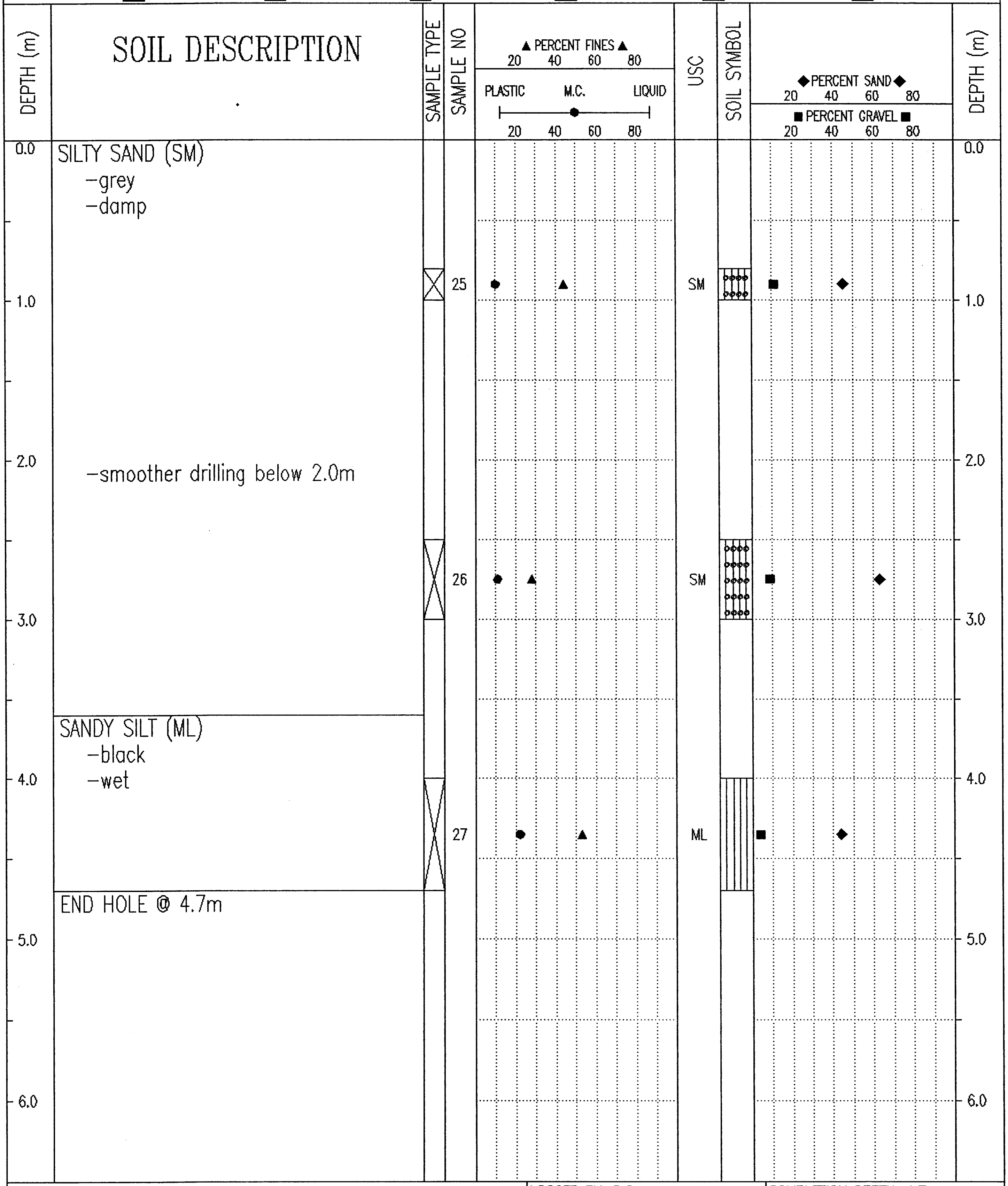
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1298
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1743+495M 9M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SILTY SAND (SM)
- grey
- damp
- smoother drilling below 2.0m

SANDY SILT (ML)
- black
- wet

END HOLE @ 4.7m

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	REVIEWED BY:	COMPLETE: 00/04/26
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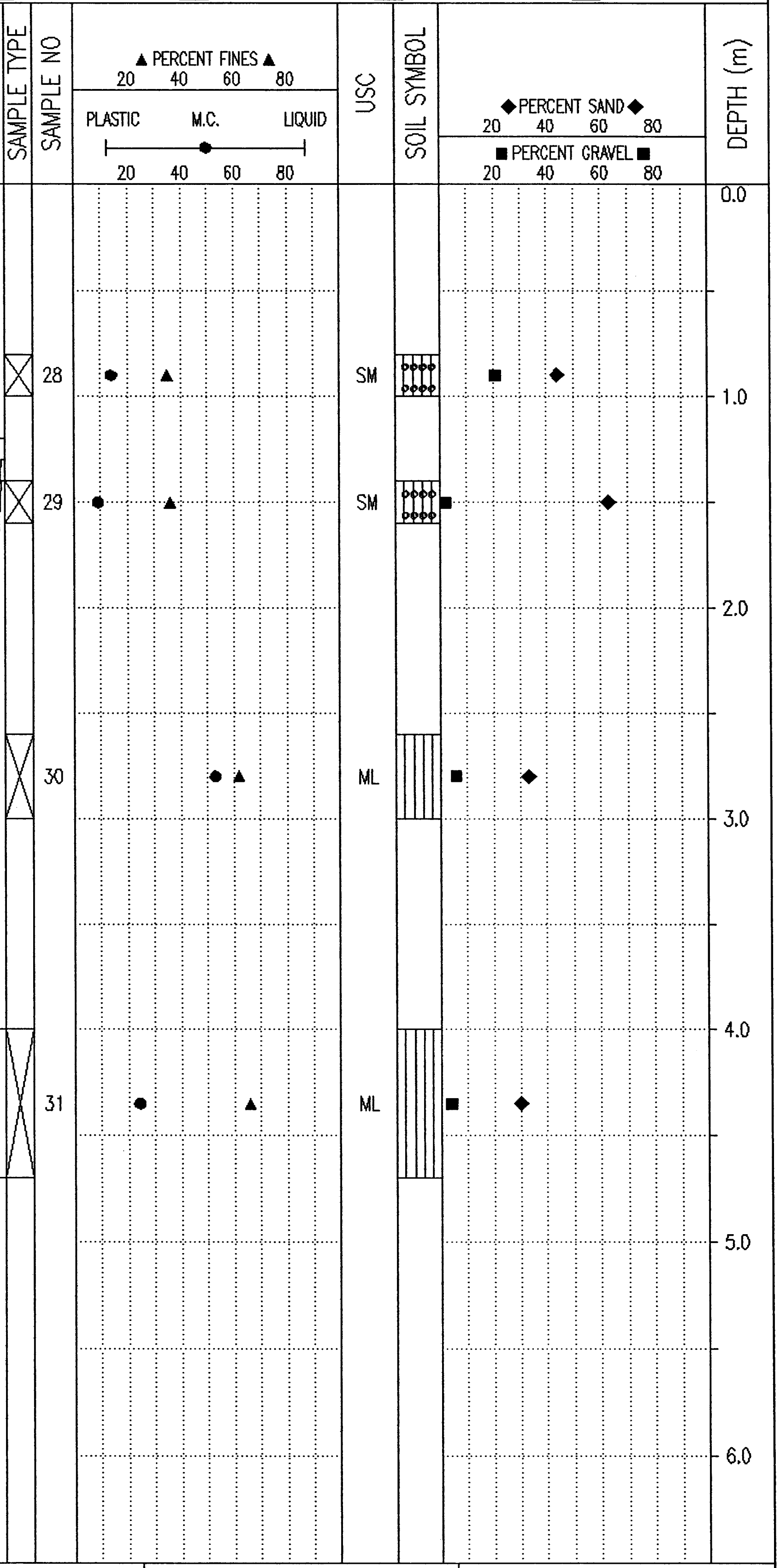
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1299
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1743+555 11.5M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◸ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	SILTY SAND WITH GRAVEL (SM) -brown -moist -with organic
	ASH -easier drilling @ 1.2m
	ORGANIC
	SILTY SAND TO SANDY SILT (SM)-(ML) -with organic -grey below 2.0m -more rocks below 2.0m -wet below 2.0m -saturated 0.2m thick @ 3.0m
4.0	SANDY SILT (ML) -wet
4.7	END HOLE @ 4.7m



Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/04/26
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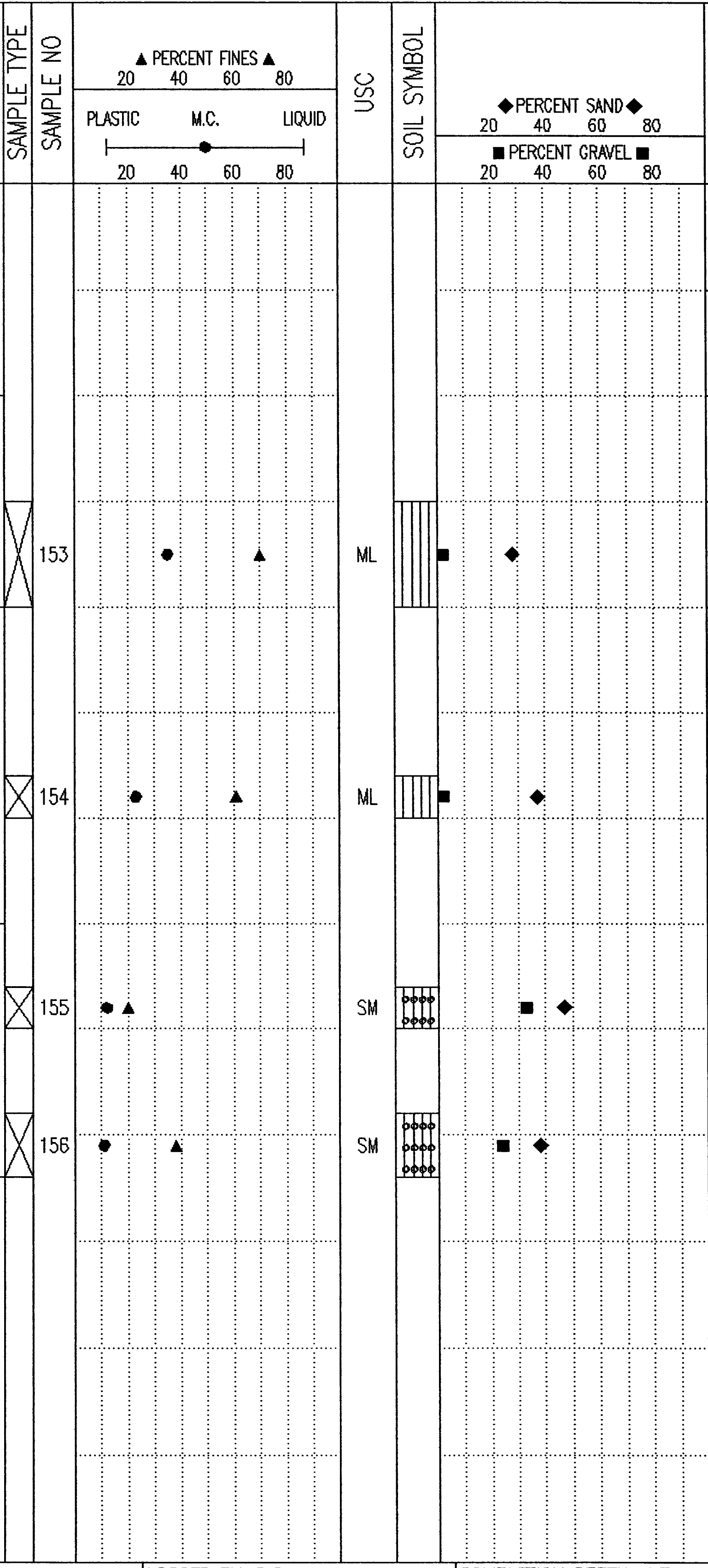
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 542-1331
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1743+557 14.3M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▌ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	ORGANIC, SILT, & SAND SEAMS -frozen below 0.5m (seasonal)
1.0	SILT WITH SAND (ML) -brown -wet to saturated -easy drilling below 1.0m -standing water @ 1.0m after drilling
2.0 ▼	SANDY SILT (ML) -saturated - water @ 2.0m
3.5	SILTY SAND WITH GRAVEL (SM) -orange (rust) -saturated -grindy drilling
4.7	END HOLE @ 4.7m



LOGGED BY: G.C.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/05/04
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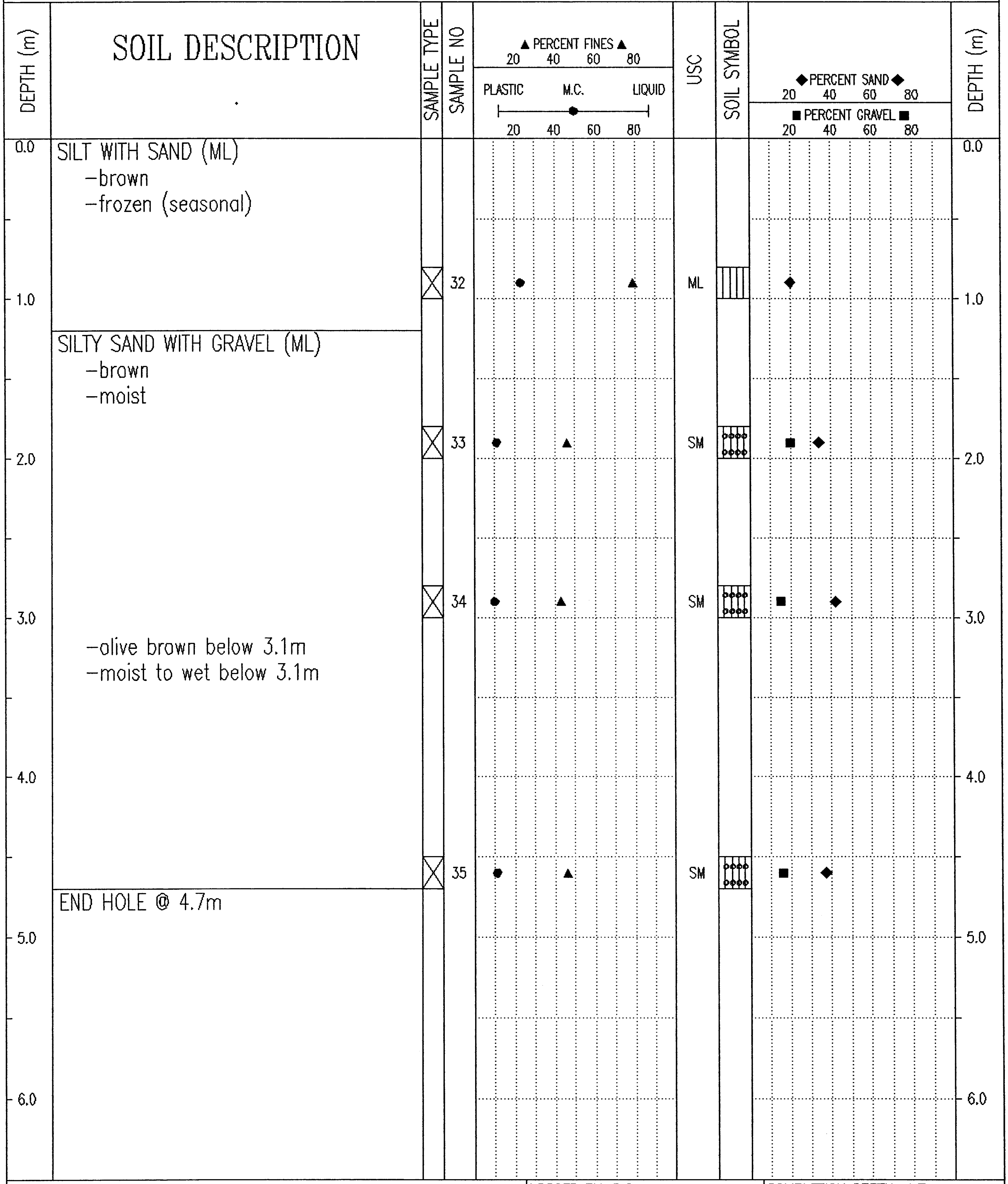
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1300
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1743+666 7.9M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ◨ CORE



SILT WITH SAND (ML)
- brown
- frozen (seasonal)

SILTY SAND WITH GRAVEL (ML)
- brown
- moist

- olive brown below 3.1m
- moist to wet below 3.1m

END HOLE @ 4.7m

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	REVIEWED BY:	COMPLETE: 00/04/26
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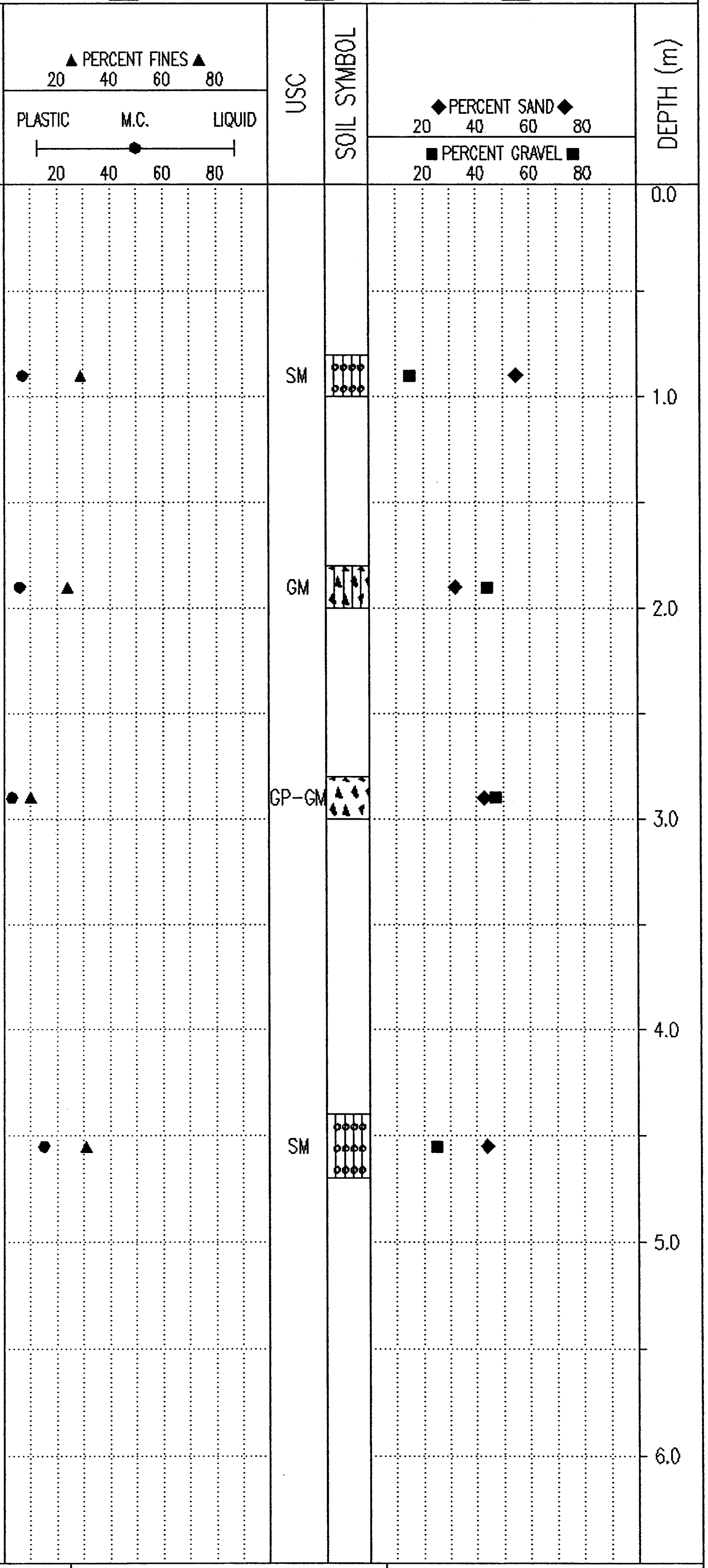
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 542-1332
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1743+722 12M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

SOIL DESCRIPTION

SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
ORGANIC			
SILTY SAND WITH GRAVEL (SM) -grey -damp	☒	157	SM
SILTY GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GM)-(GP-GM) -grey -damp	☒ ☒	158 159	GM GP-GM
SILTY SAND WITH GRAVEL (SM) -olive -wet -easier drilling	☒	160	SM
END HOLE @ 4.7m			



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LOGGED BY: G.C.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/05/04
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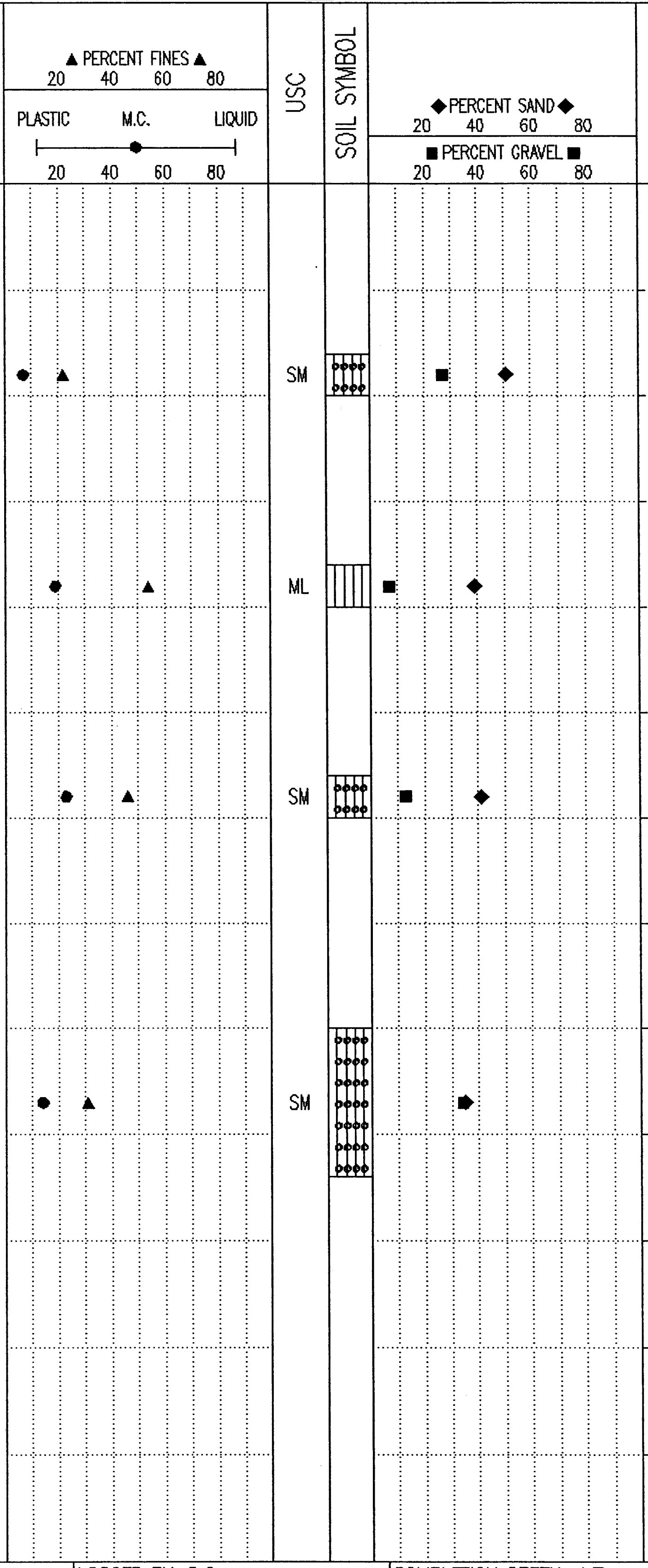
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541–1301
ENGINEERNG CAPITAL	KM 1729–1787 A/H	Project No: 092–202101–0361
B–40L	LOCATION: 1743+770 10.4M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◩ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

SOIL DESCRIPTION

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	GRAVEL FILL (Rest stop)			
1.0	SILTY SAND WITH GRAVEL TO SANDY SILT (SM)–(ML) –grey –damp –grindy drilling @ 1.0m –brown below 1.5m –moist to frozen below 1.5m	☒ ☒	36 37	SM ML
2.0	SILTY SAND (SM) –grey –frozen	☒	38	SM
3.0	SILTY SAND WITH GRAVEL (SM) –olive brown –frozen (Vx)	☒	39	SM
4.0	END HOLE @ 4.7m			
5.0				
6.0				



Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/04/26
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 542–1333
ENGINEERNG CAPITAL	KM 1729–1787 A/H	Project No: 092–202101–0361
B–40L	LOCATION: 1743+869 17.8M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)

SOIL DESCRIPTION

0.0 ORGANICS

–frozen @ 0.3m

SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL TO SILTY SAND (GM)–(SM)

–brown

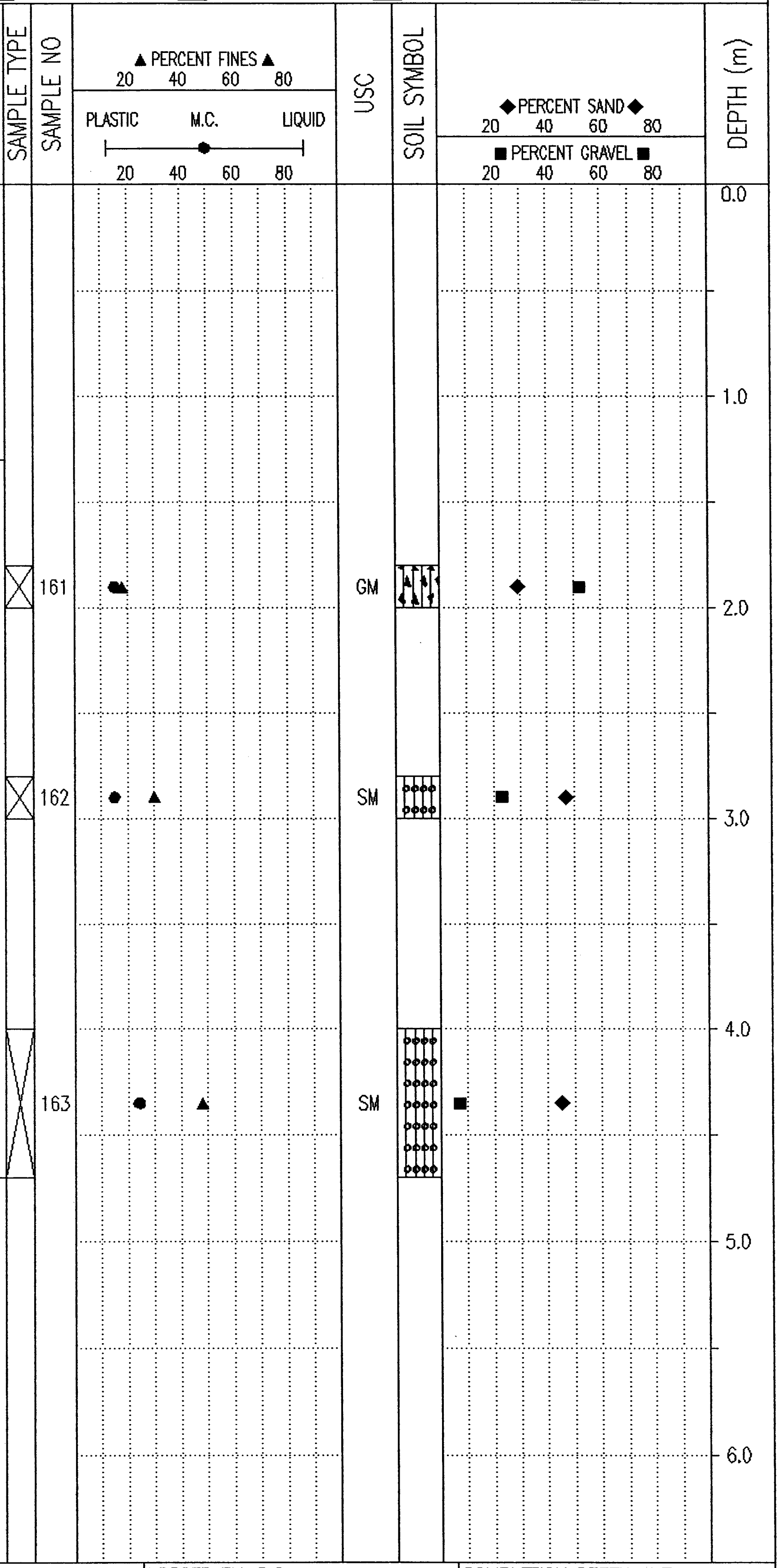
–saturated

–water in test hole @ 1.3m

END HOLE @ 4.7m

CPS Outlet

–Test hole opposite side of Hwy from Th #1302



LOGGED BY: G.C.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/05/04
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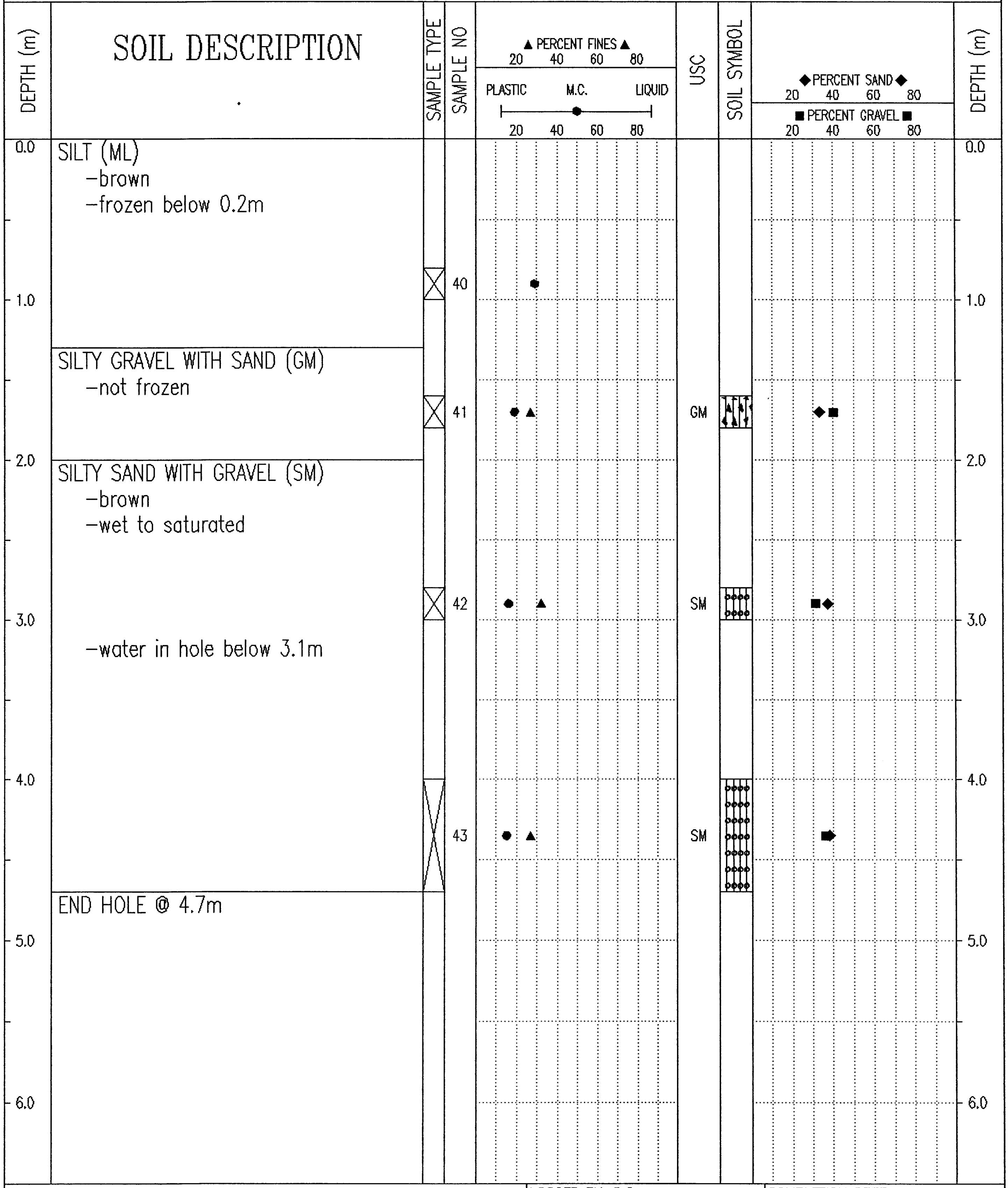
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1302
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1743+879 12M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SILT (ML)
- brown
- frozen below 0.2m

SILTY GRAVEL WITH SAND (GM)
- not frozen

SILTY SAND WITH GRAVEL (SM)
- brown
- wet to saturated
- water in hole below 3.1m

END HOLE @ 4.7m

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	REVIEWED BY:	COMPLETE: 00/04/26
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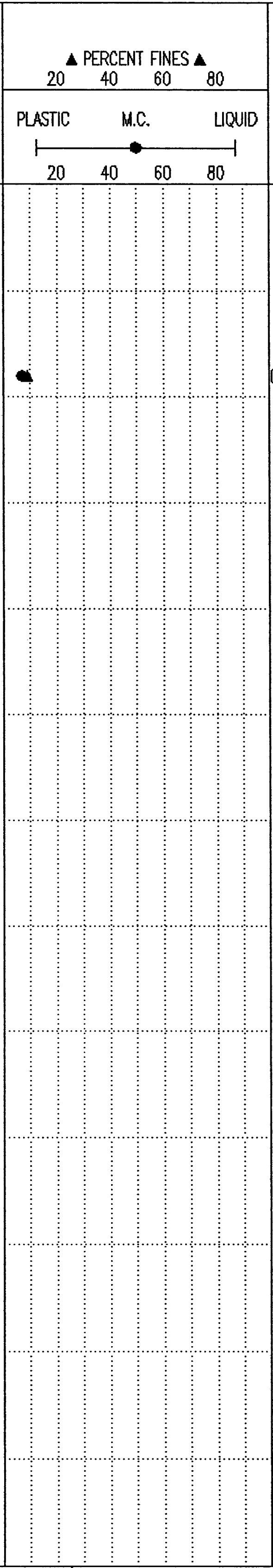
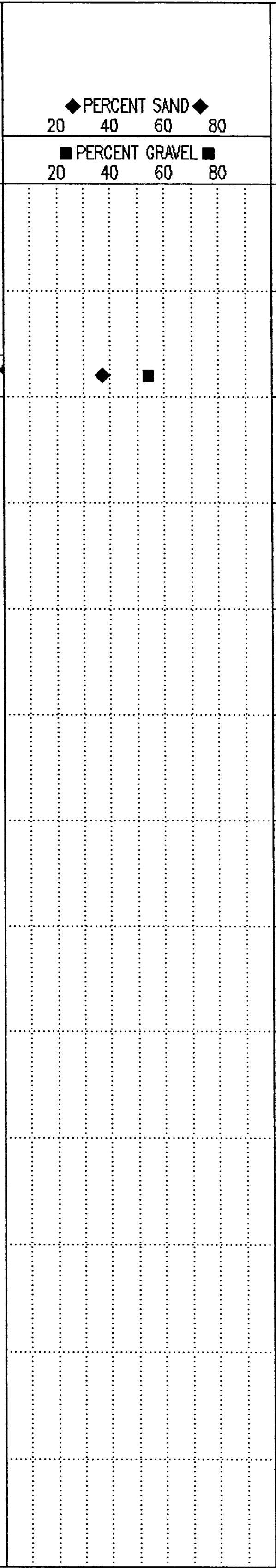
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1334
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1743+967 19.8M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE





DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	DEPTH (m)
0.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -grey -damp -water at 1.0m -unable to retrieve sample below 1.0m -H20 washed off auger -sandy gravel observed (angular)					0.0
1.0		☒	164	GP-GM		1.0
2.0	-rough drilling below 2.0m					2.0
3.0	END HOLE @ 3.0M CPS Outlet					3.0
4.0						4.0
5.0						5.0
6.0						6.0

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	REVIEWED BY:	COMPLETE: 00/05/10
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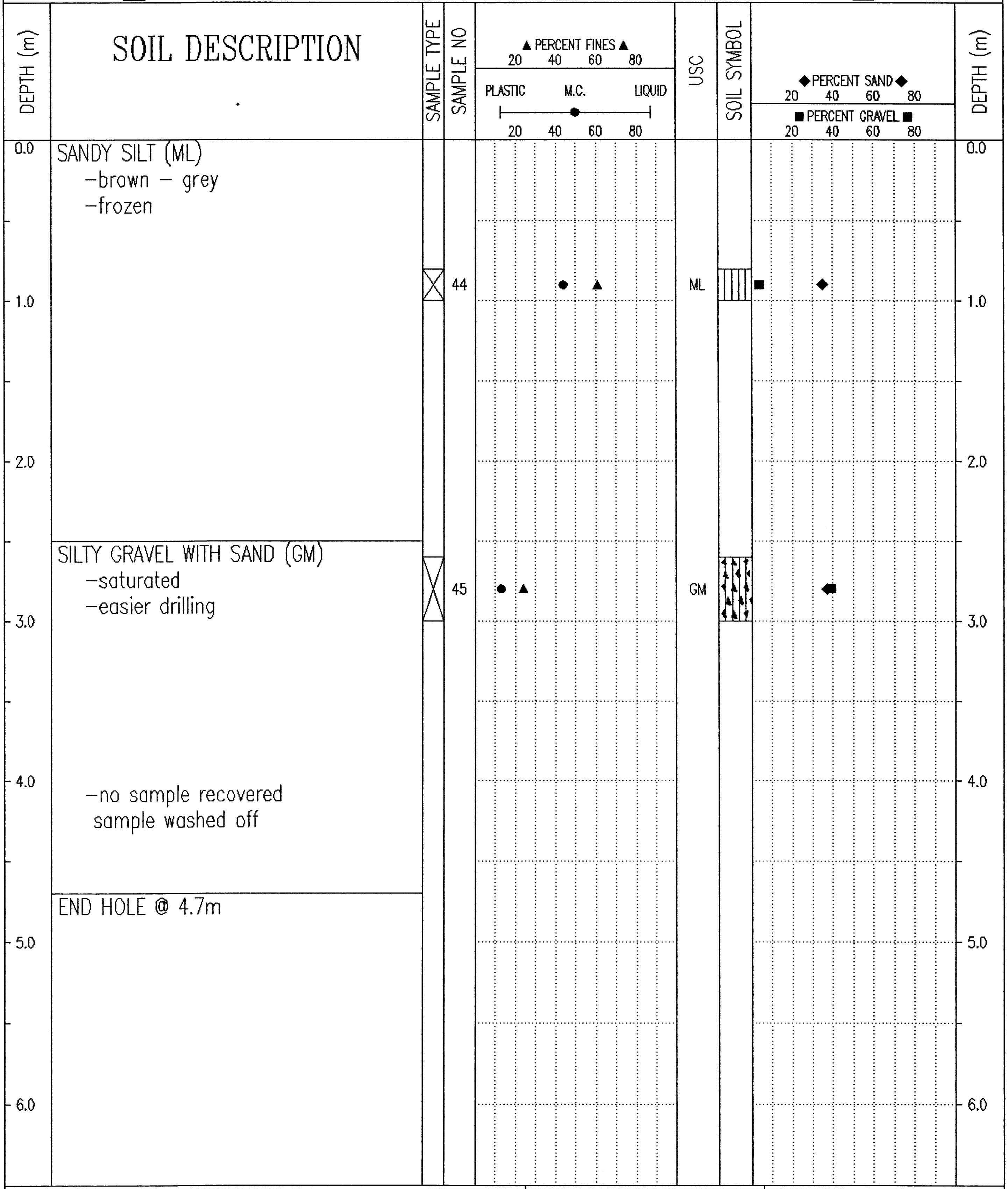
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1303
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1743+978 6.5M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SANDY SILT (ML)
- brown – grey
- frozen

SILTY GRAVEL WITH SAND (GM)
- saturated
- easier drilling

- no sample recovered sample washed off

END HOLE @ 4.7m

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REVIEWED BY:	COMPLETE: 00/04/26
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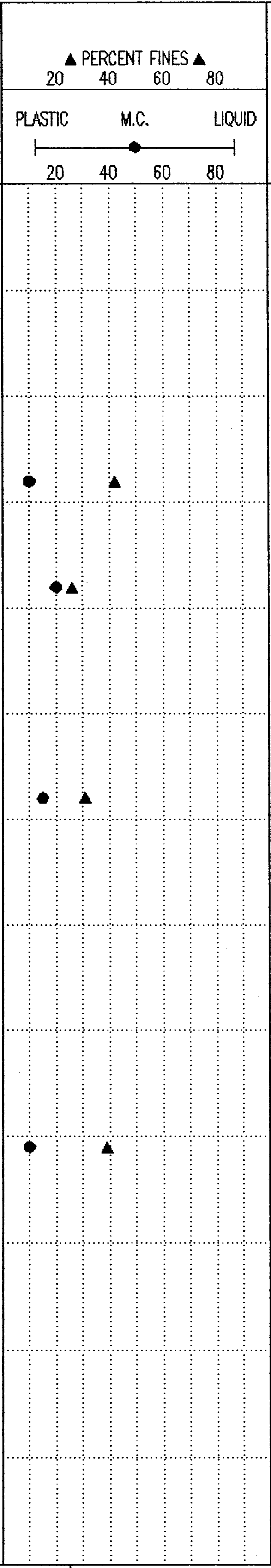
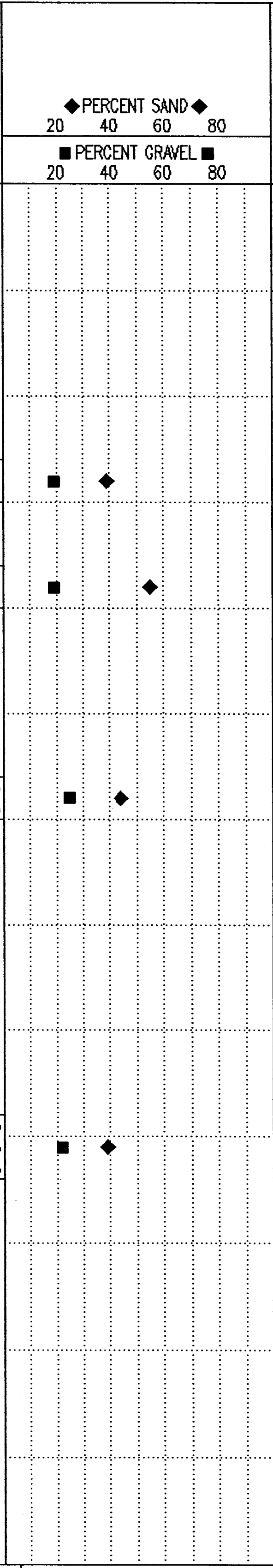
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1335
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1744+068 16.7M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◩ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ◨ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC & ASH (mixture)			
1.0	SILTY SAND WITH GRAVEL (SM) -organic contamination 1.0m to 1.7m -black -wet	☒	165	SM
	-grey below 1.7m -saturated below 1.7m	☒	166	SM
2.0				
	-olive below 2.6m	☒	167	SM
3.0				
4.0		☒	168	SM
	END HOLE @ 4.7m Culvert outlet			
5.0				
6.0				





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	REVIEWED BY:	COMPLETE: 00/05/10
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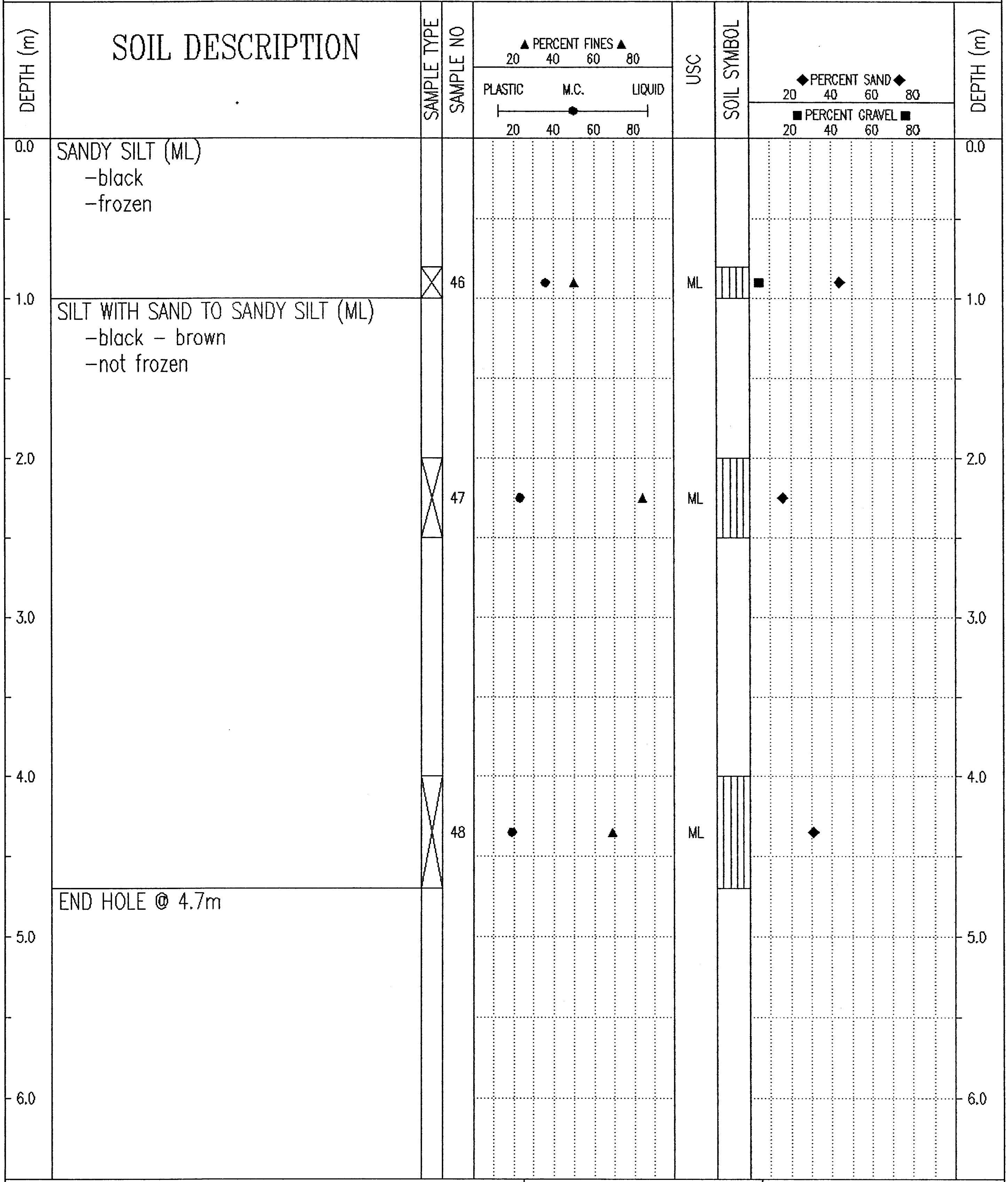
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1304
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1744+073 5.7M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◩ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ◨ CORE



SANDY SILT (ML)
-black
-frozen

SILT WITH SAND TO SANDY SILT (ML)
-black - brown
-not frozen

END HOLE @ 4.7m

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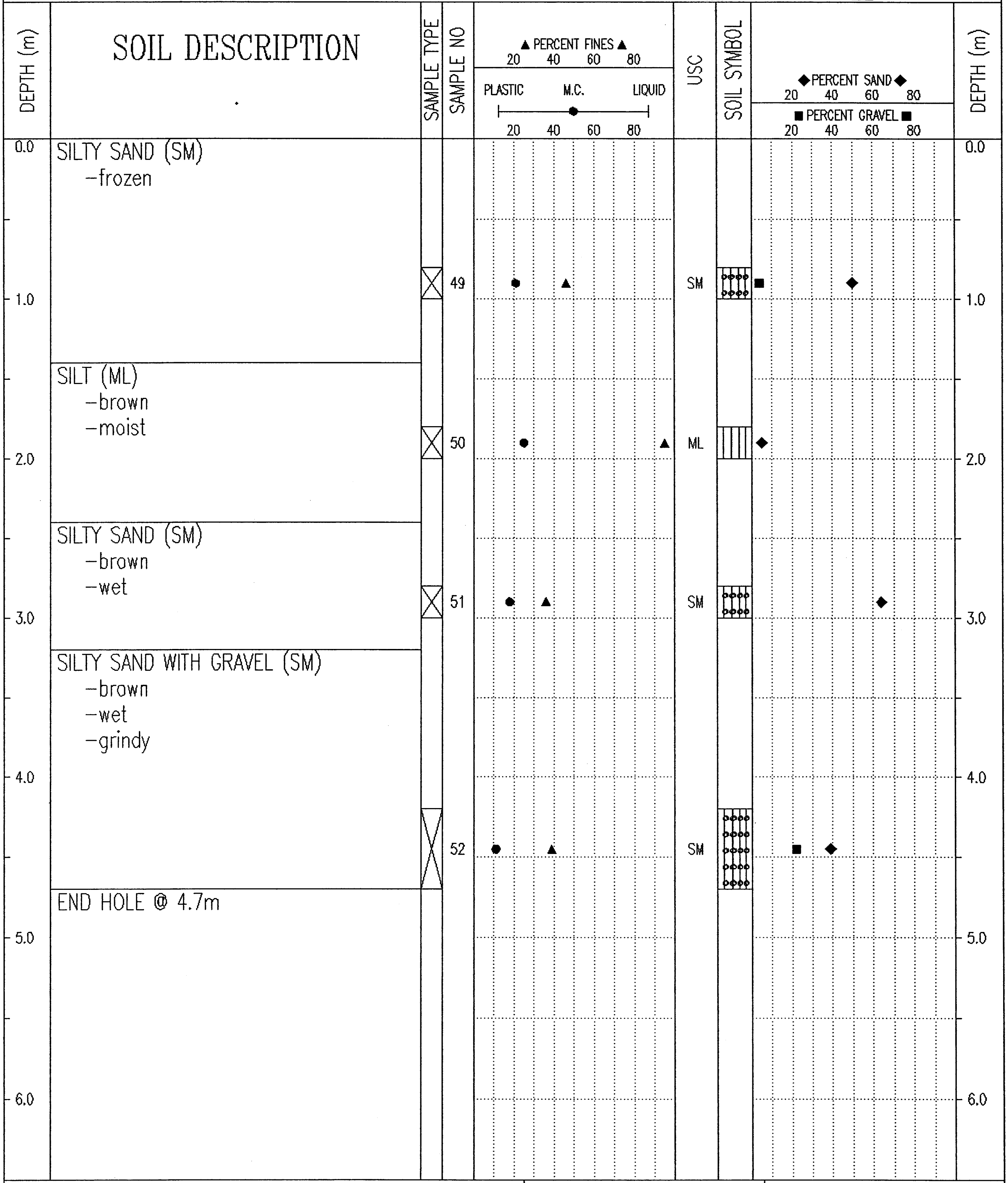
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1305
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1744+112 11.9M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	SILTY SAND (SM) -frozen	AUGER	49	SM
	SILT (ML) -brown -moist	AUGER	50	ML
	SILTY SAND (SM) -brown -wet	AUGER	51	SM
	SILTY SAND WITH GRAVEL (SM) -brown -wet -grindy	AUGER	52	SM
	END HOLE @ 4.7m			

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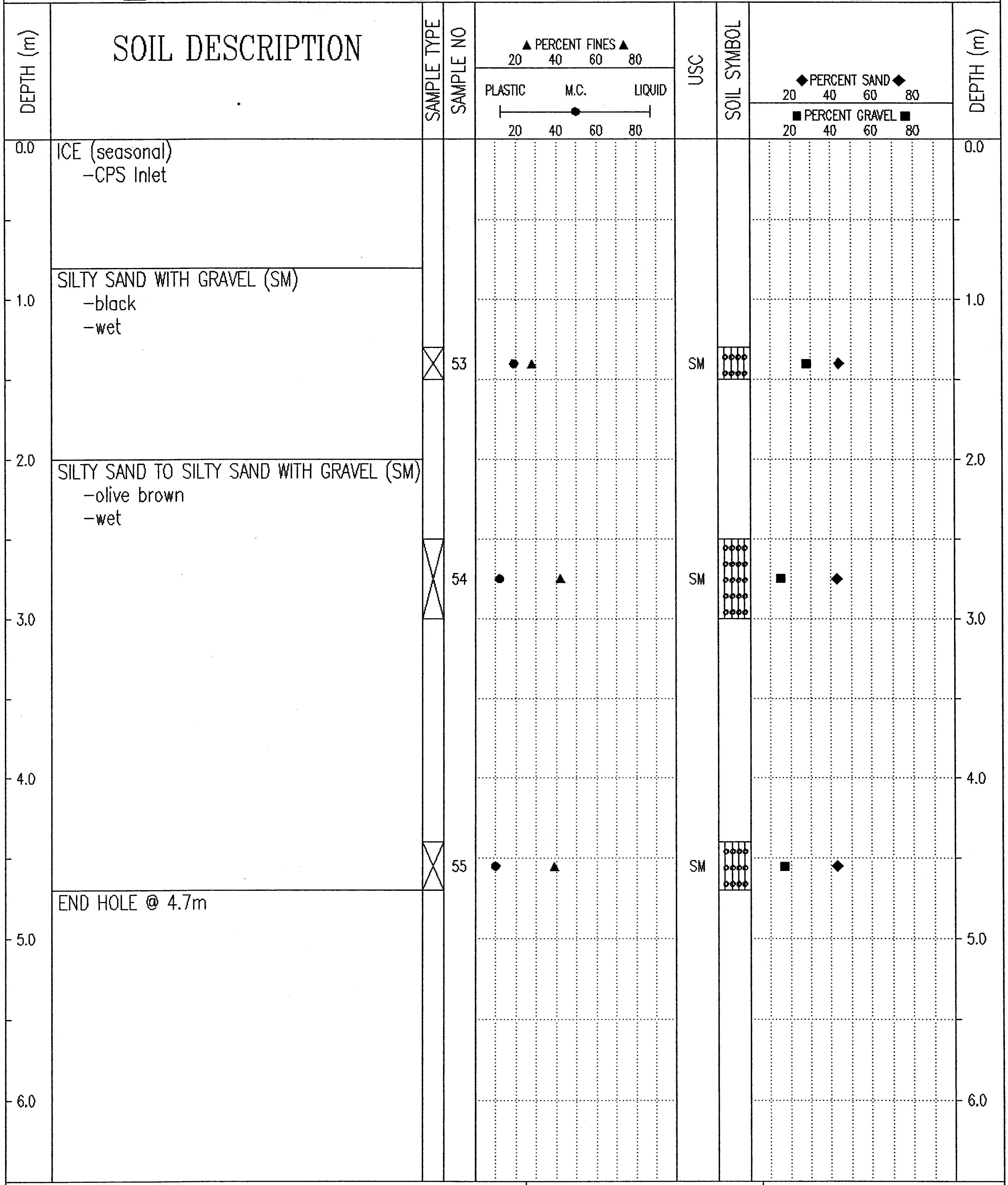
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1306
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1744+161 18.2M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



ICE (seasonal)
-CPS Inlet

SILTY SAND WITH GRAVEL (SM)
-black
-wet

SILTY SAND TO SILTY SAND WITH GRAVEL (SM)
-olive brown
-wet

END HOLE @ 4.7m

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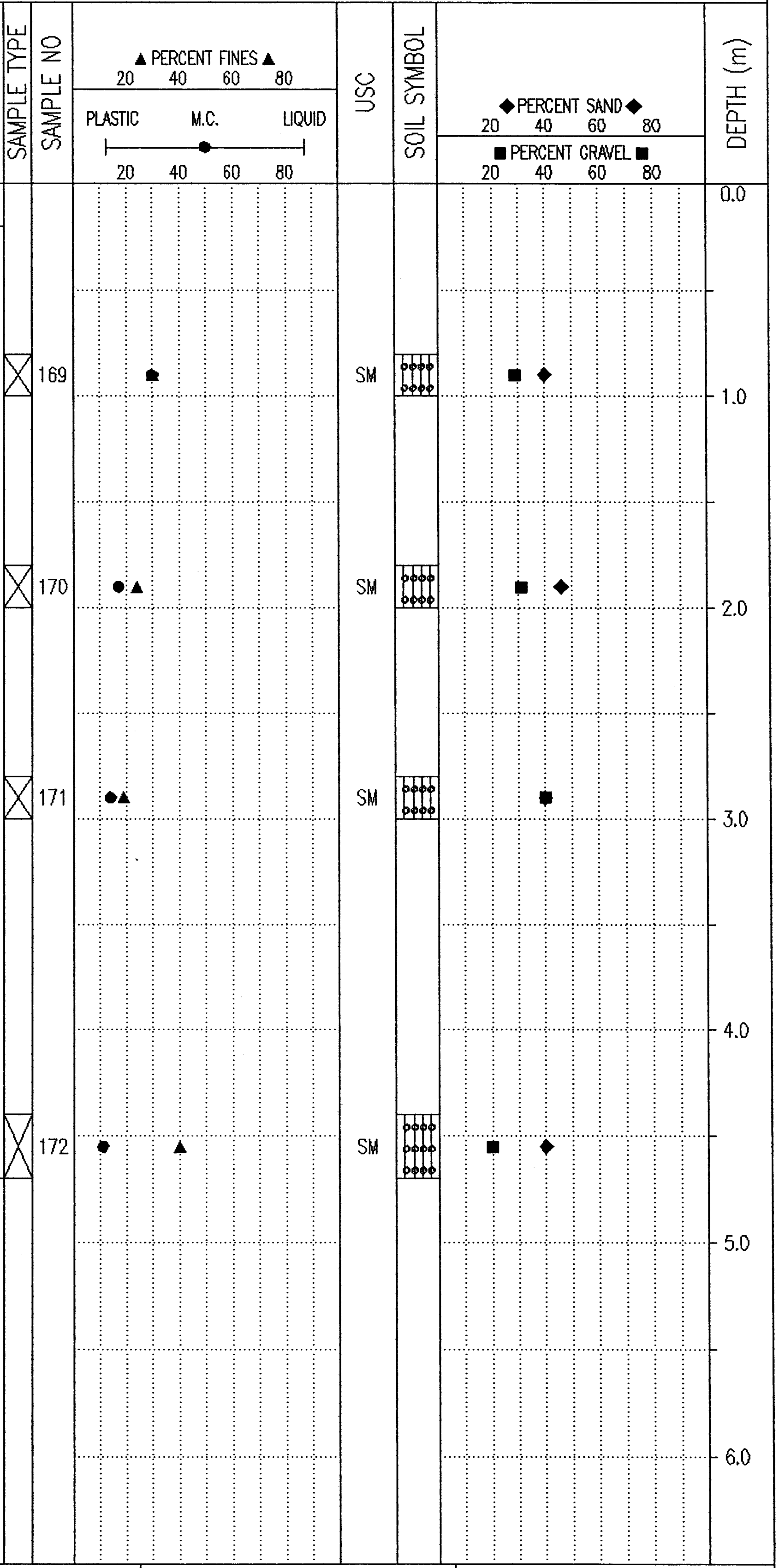
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1336
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1744+169 22.7M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	ORGANIC
	SILTY SAND WITH GRAVEL (SM) –frozen (seasonal)
1.0	
	–saturated below 1.2m –water in hole below 1.5m
2.0	
3.0	
4.0	
	END HOLE @ 4.7m Culvert outlet
5.0	
6.0	



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REVIEWED BY:	COMPLETE: 00/05/10
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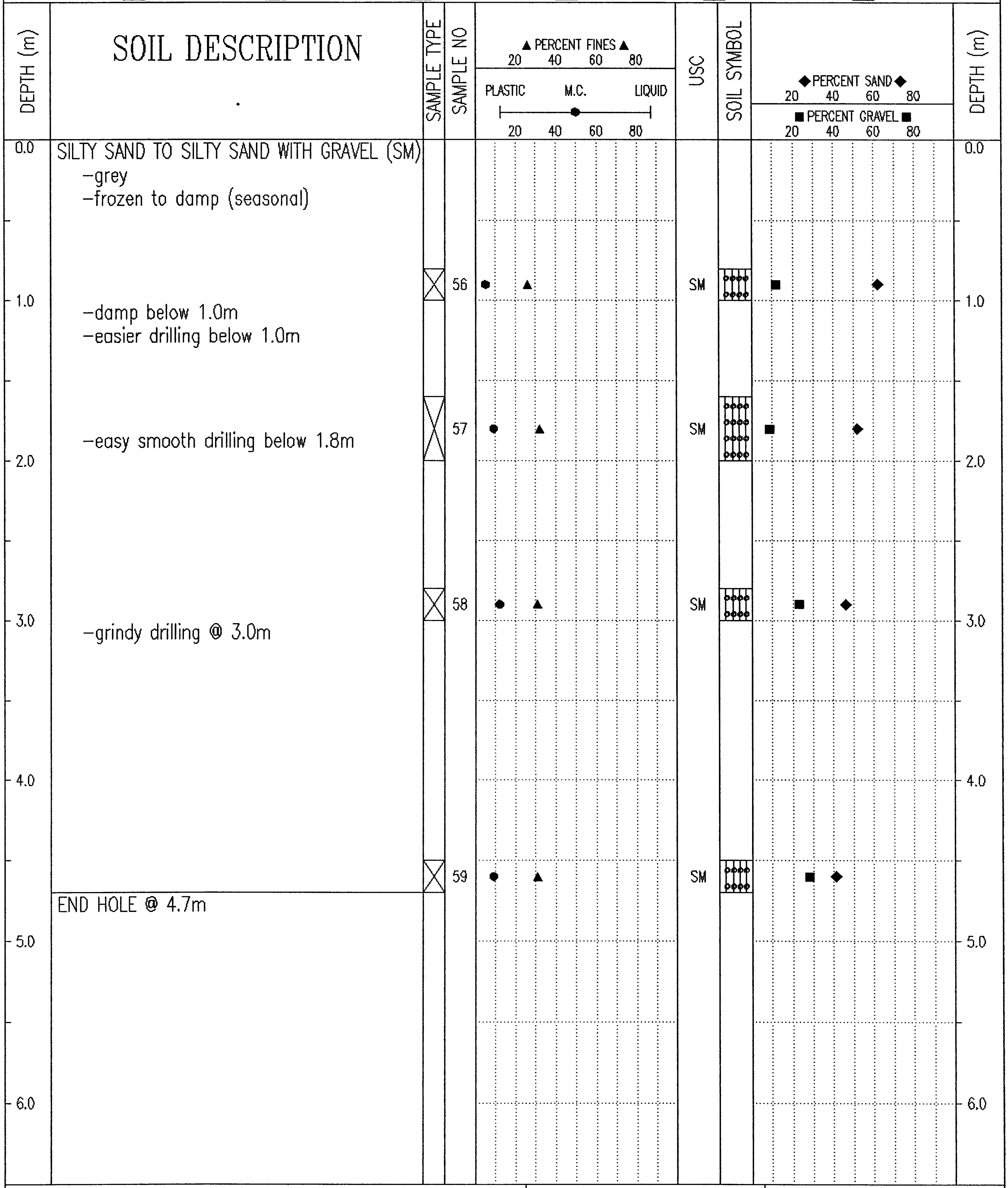
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1307
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1744+237 13.9M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SILTY SAND TO SILTY SAND WITH GRAVEL (SM)
- grey
- frozen to damp (seasonal)
- damp below 1.0m
- easier drilling below 1.0m
- easy smooth drilling below 1.8m
- grindy drilling @ 3.0m

END HOLE @ 4.7m

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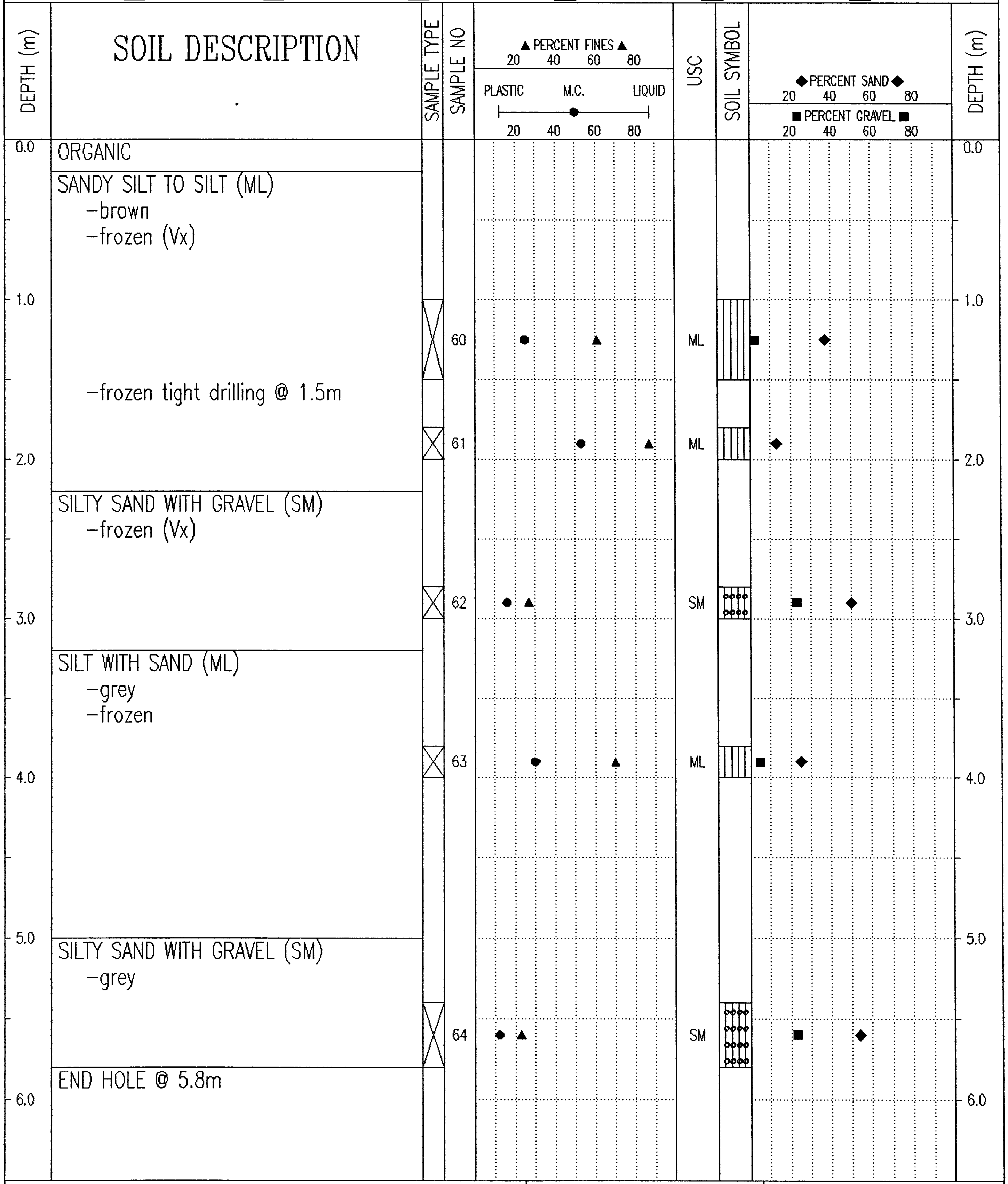
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1308
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1744+331 17.4M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⧄ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SOIL DESCRIPTION

ORGANIC

SANDY SILT TO SILT (ML)
-brown
-frozen (Vx)
-frozen tight drilling @ 1.5m

SILTY SAND WITH GRAVEL (SM)
-frozen (Vx)

SILT WITH SAND (ML)
-grey
-frozen

SILTY SAND WITH GRAVEL (SM)
-grey

END HOLE @ 5.8m

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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541–1309
ENGINEERNG CAPITAL	KM 1729–1787 A/H	Project No: 092–202101–0361
B–40L	LOCATION: 1744+445 13.3M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	SILTY SAND WITH GRAVEL (SM) –grey –damp – frozen –previously stripped – no organics
1.0	
	–damp below 1.2m –grindy below 1.2m
2.0	–brown below 2.0m –wet below 2.0m
3.0	
	SILTY SAND (SM) –trace of organics –grey –wet
4.0	
	END HOLE @ 4.7m
5.0	
6.0	

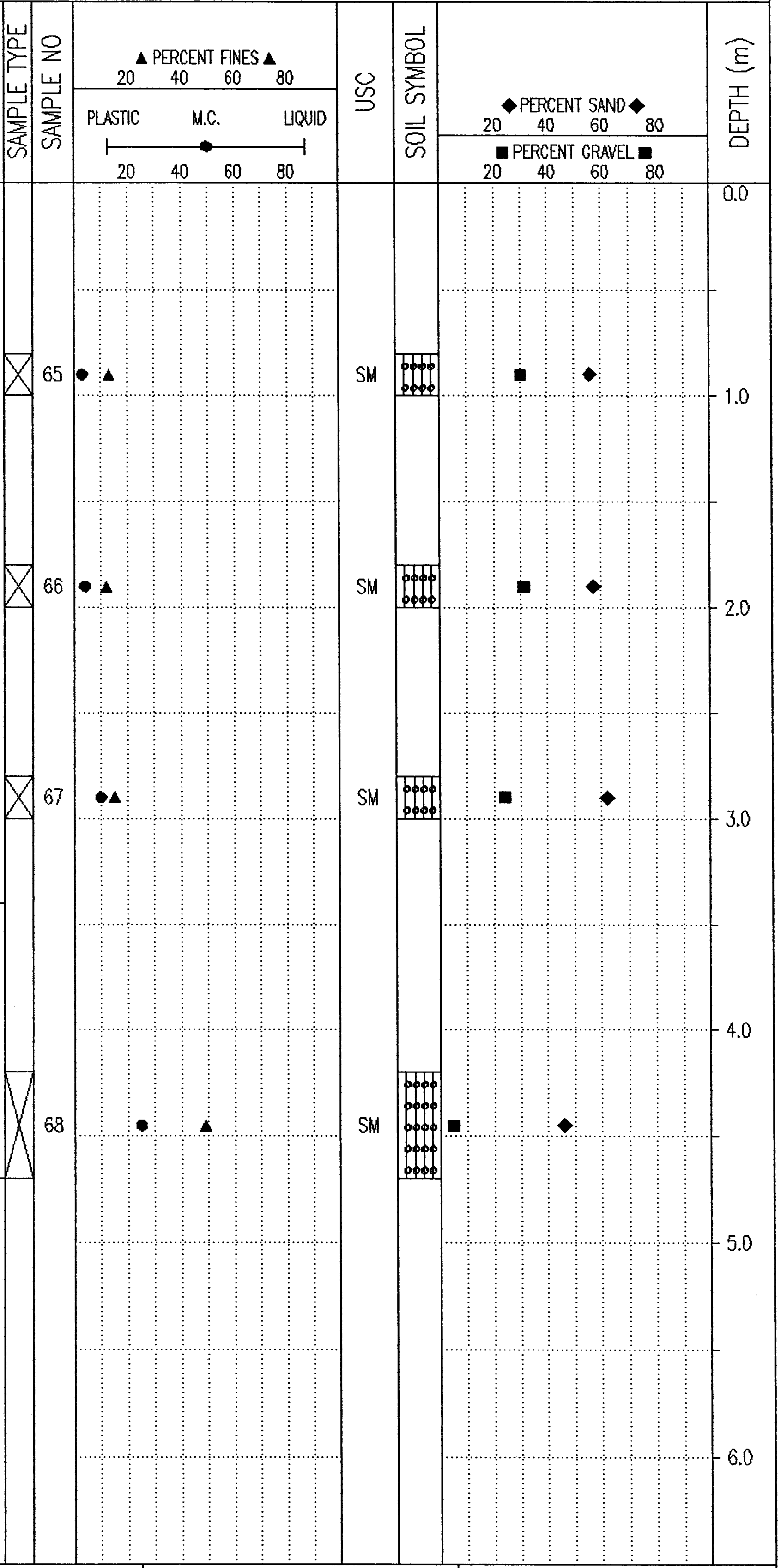

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	Fig. No:
COMPLETION DEPTH: 4.7 m	COMPLETE: 00/04/27
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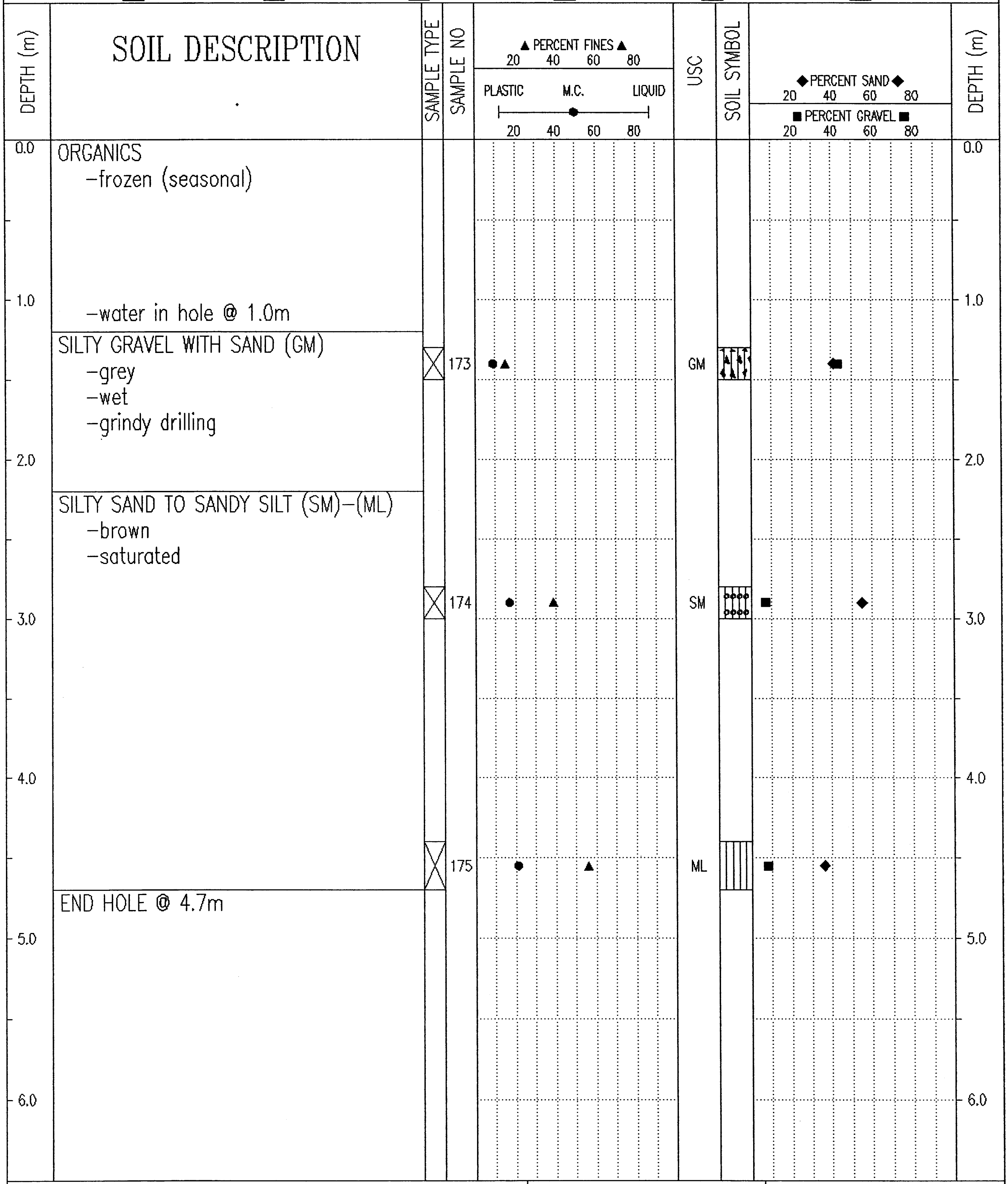
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1337
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1744+459 10.1M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANICS -frozen (seasonal) -water in hole @ 1.0m			
	SILTY GRAVEL WITH SAND (GM) -grey -wet -grindy drilling	☒	173	GM
	SILTY SAND TO SANDY SILT (SM)-(ML) -brown -saturated	☒	174	SM
		☒	175	ML
	END HOLE @ 4.7m			

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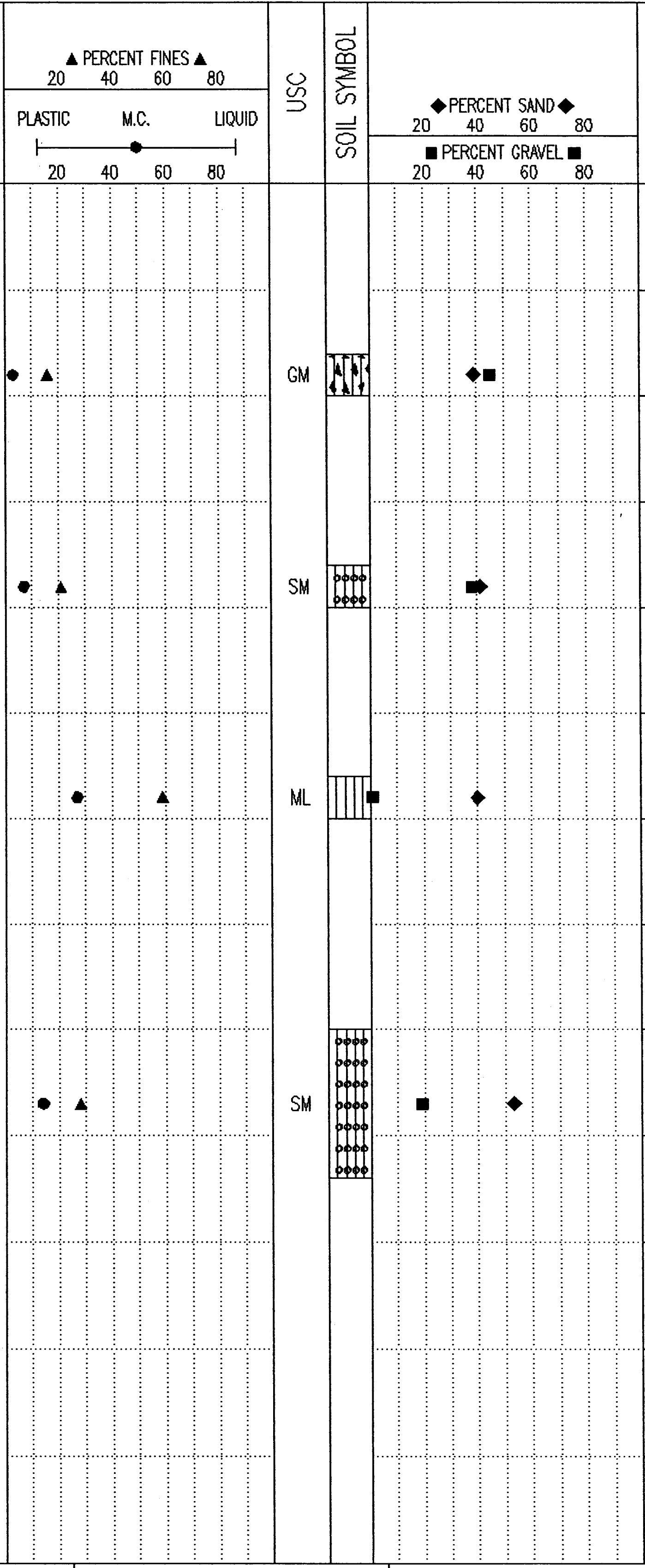
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1310
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1744+502 13.6M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◸ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -previously stripped -brown -frozen -damp to dry -grinding @ 0.5m			
1.0		☒	69	GM
	-damp below 1.5m -rough drilling below 1.5m			
2.0		☒	70	SM
	SANDY SILT (ML) -brown -wet -easier drilling			
3.0		☒	71	ML
	SILTY SAND WITH GRAVEL (SM) -moist			
4.0		☒	72	SM
	END HOLE @ 4.7m			
5.0				
6.0				



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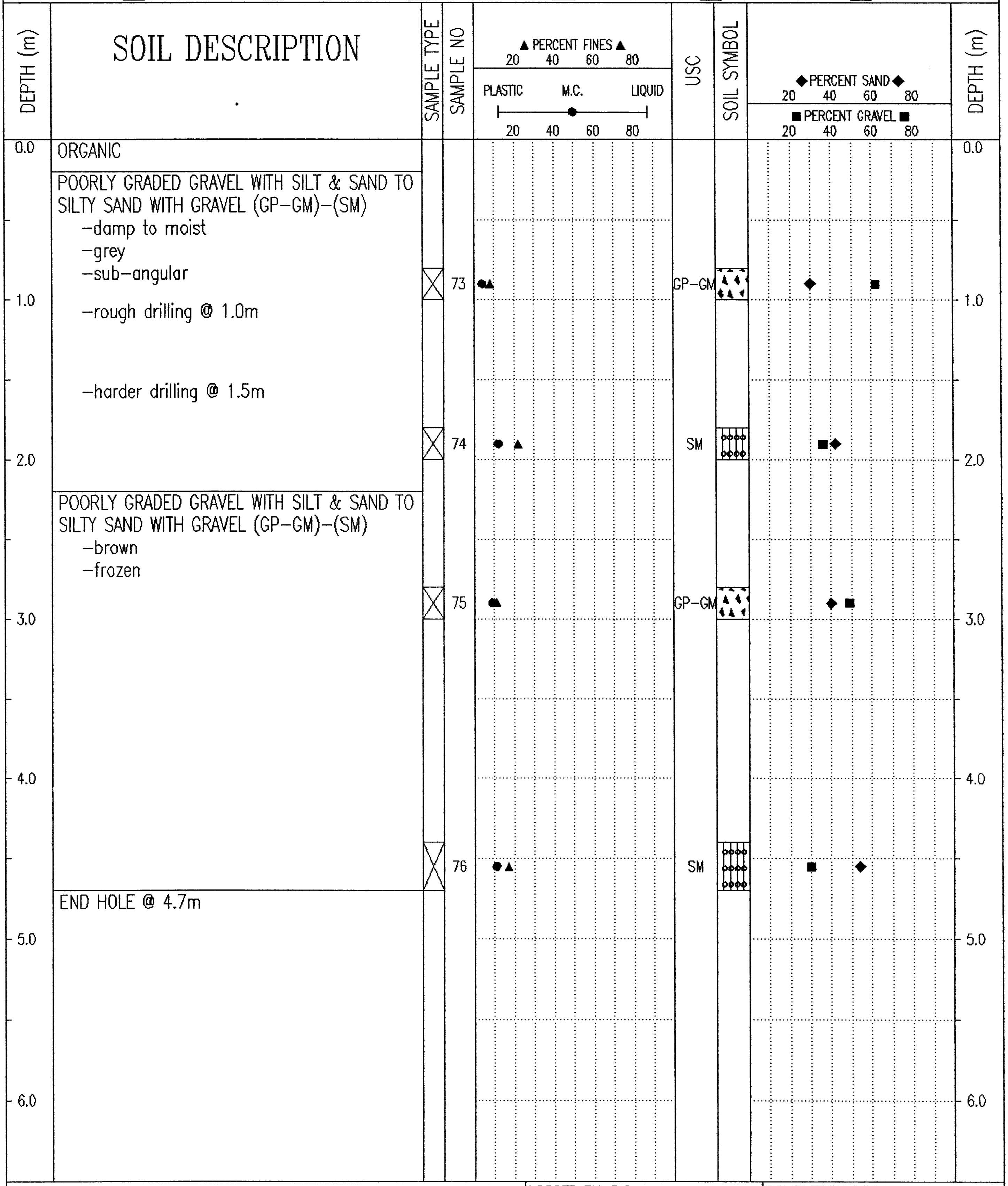
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541–1311
ENGINEERNG CAPITAL	KM 1729–1787 A/H	Project No: 092–202101–0361
B–40L	LOCATION: 1744+591 19.5M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



ORGANIC

POORLY GRADED GRAVEL WITH SILT & SAND TO SILTY SAND WITH GRAVEL (GP–GM)–(SM)
- –damp to moist
- –grey
- –sub–angular
- –rough drilling @ 1.0m
- –harder drilling @ 1.5m

POORLY GRADED GRAVEL WITH SILT & SAND TO SILTY SAND WITH GRAVEL (GP–GM)–(SM)
- –brown
- –frozen

END HOLE @ 4.7m

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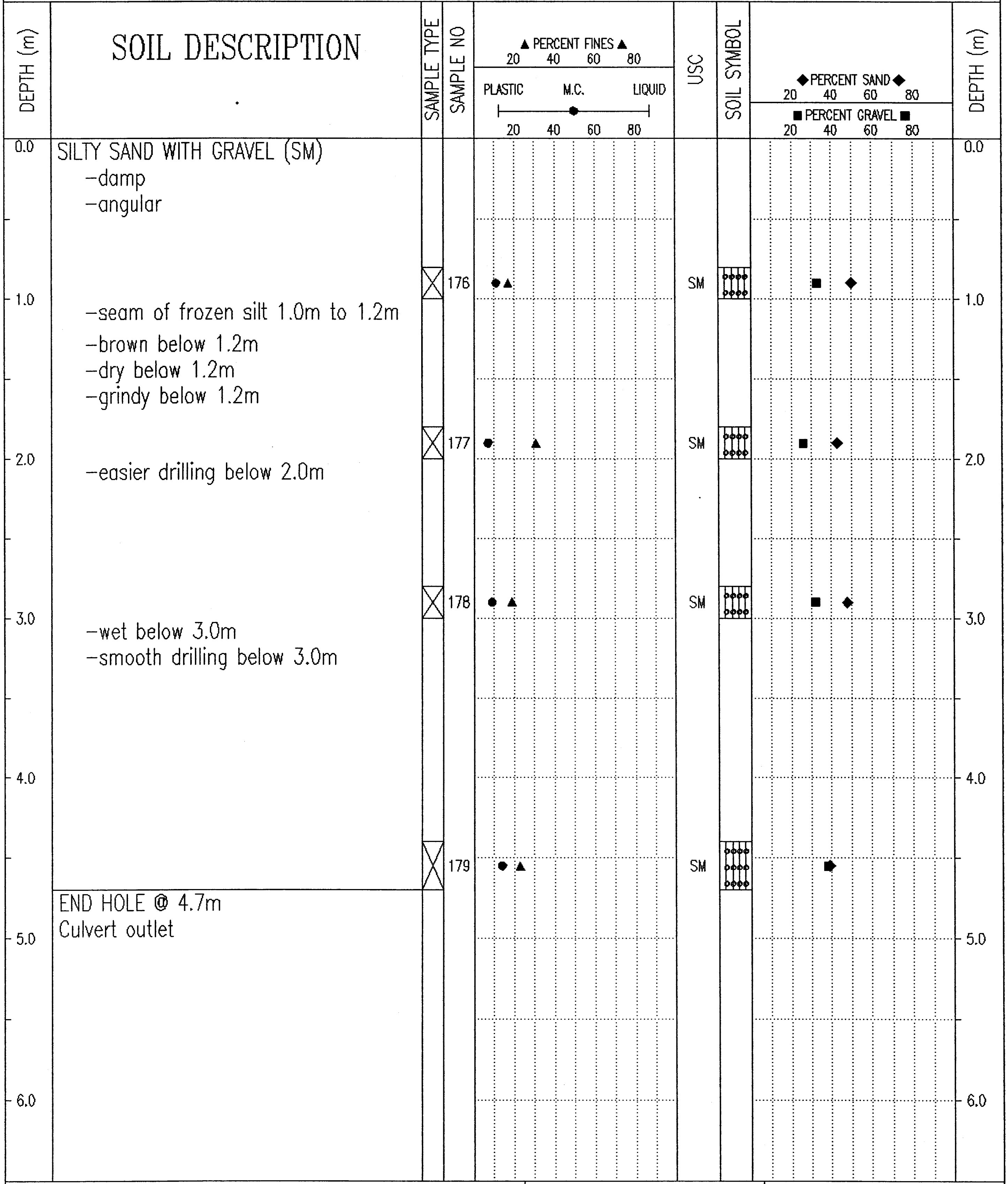
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543–1338
ENGINEERNG CAPITAL	KM 1729–1787 A/H	Project No: 092–202101–0361
B–40L	LOCATION: 1744+593 16.9M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯▯ TUBE ▮ CORE



SILTY SAND WITH GRAVEL (SM)
- damp
- angular
- seam of frozen silt 1.0m to 1.2m
- brown below 1.2m
- dry below 1.2m
- grindy below 1.2m
- easier drilling below 2.0m
- wet below 3.0m
- smooth drilling below 3.0m

END HOLE @ 4.7m
Culvert outlet

SAMPLE TYPE	SAMPLE NO	USC
☒	176	SM
☒	177	SM
☒	178	SM
☒	179	SM

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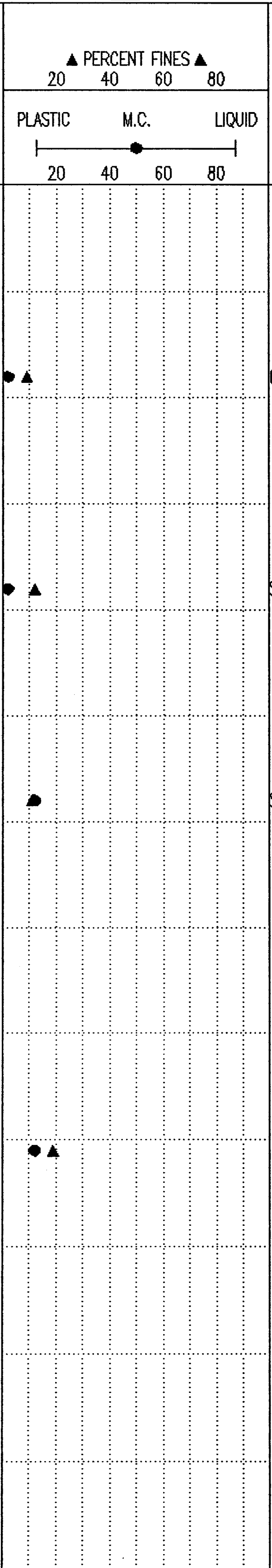
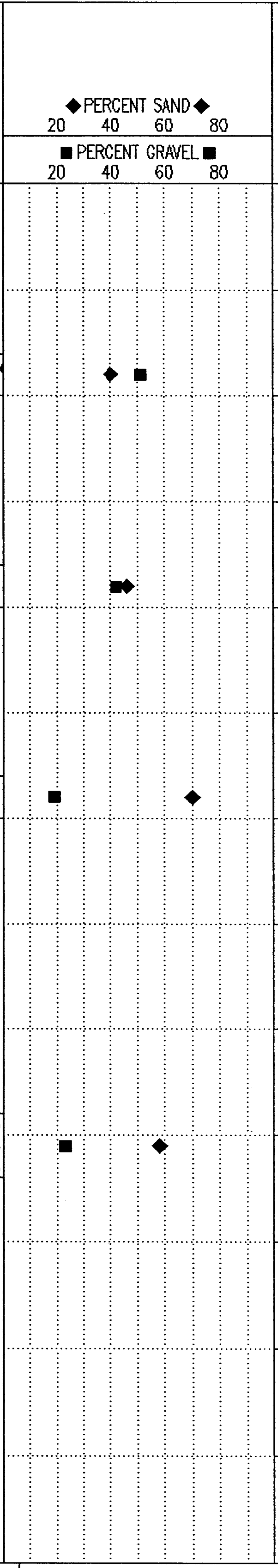
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1312
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1744+700 19M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC			
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -grey -dry -sub-angular -rough drilling @ 1.0m	☒	77	GP-GM
1.0				
	WELL-GRADED SAND WITH SILT & GRAVEL(SW-SM) -grey -damp	☒	78	SW-SM
2.0	-frozen (Nf) below 2.5m -harder drilling from 2.5m	☒	79	SW-SM
3.0				
4.0	SILTY SAND WITH GRAVEL (SM) -grey -damp -hard slow grindy drilling	☒	80	SM
	END HOLE @ 4.7m			
5.0				
6.0				





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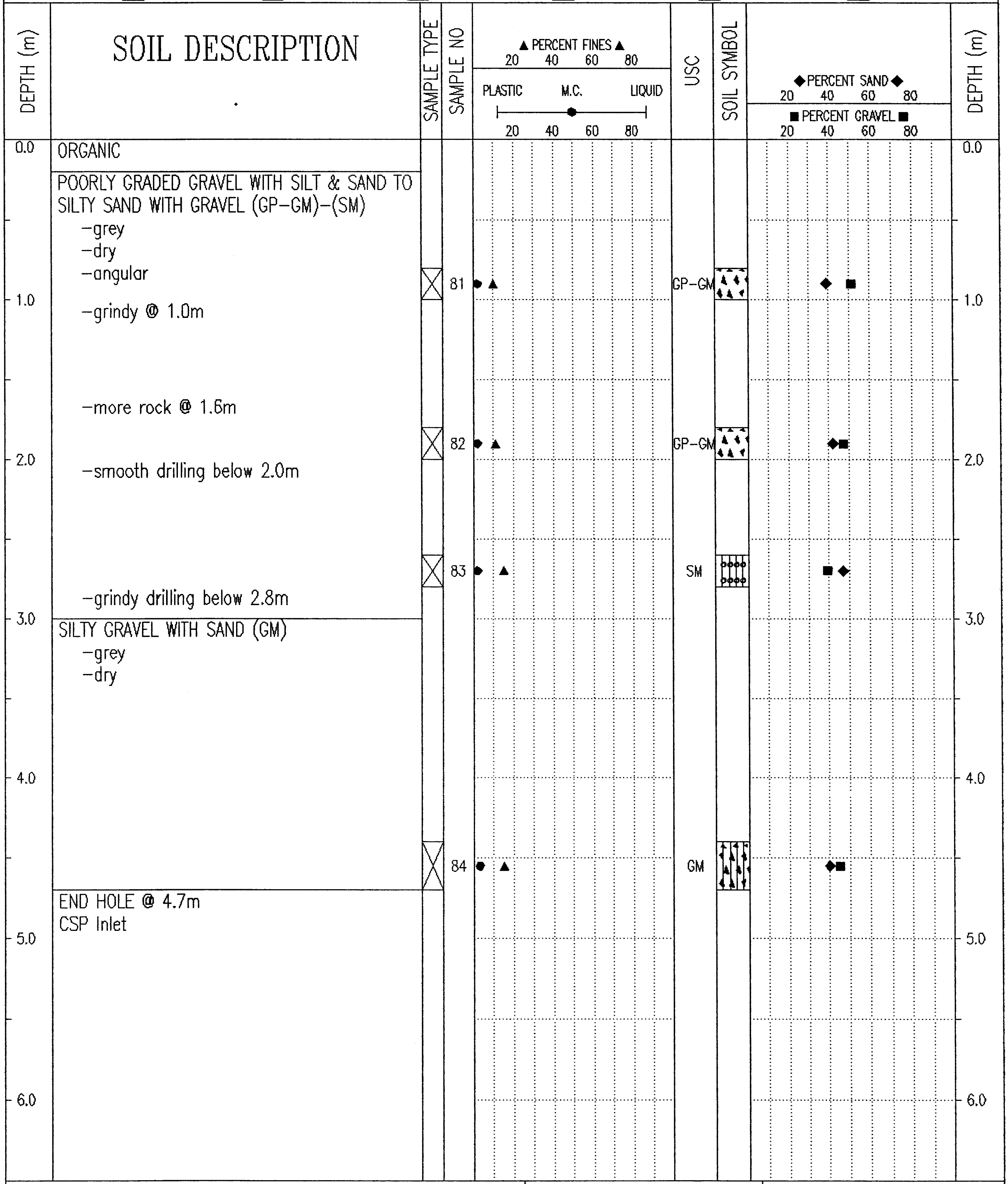
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1313
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1744+772 16.7M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SOIL DESCRIPTION

ORGANIC

POORLY GRADED GRAVEL WITH SILT & SAND TO SILTY SAND WITH GRAVEL (GP-GM)-(SM)
- -grey
- -dry
- -angular
- -grindy @ 1.0m
- -more rock @ 1.6m
- -smooth drilling below 2.0m
- -grindy drilling below 2.8m

SILTY GRAVEL WITH SAND (GM)
- -grey
- -dry

END HOLE @ 4.7m
CSP Inlet

SAMPLE TYPE	SAMPLE NO	USC
☒	81	GP-GM
☒	82	GP-GM
☒	83	SM
☒	84	GM

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/04/27
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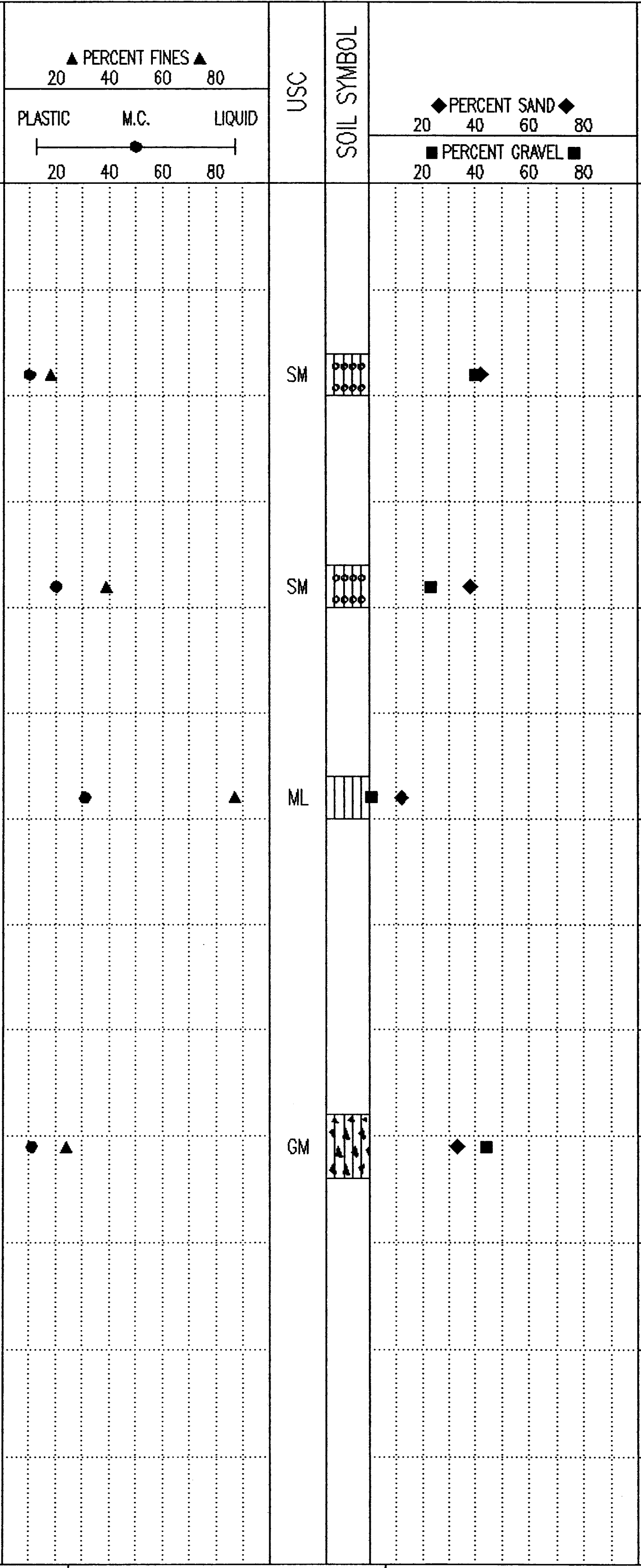
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1339
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1744+781 16.9RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC -black			
	SILTY SAND WITH GRAVEL (SM) -with organic -brown -dry	☒	180	SM
1.0	-grey below 1.3m -organic contamination from above -grindy drilling below 1.3m	☒	181	SM
2.0				
	SILT (ML) -brown -moist -smooth drilling	☒	182	ML
3.0	SILTY GRAVEL WITH SAND (GM)			
4.0		☒	183	GM
	END HOLE @ 4.7m Culvert Outlet			
5.0				
6.0				



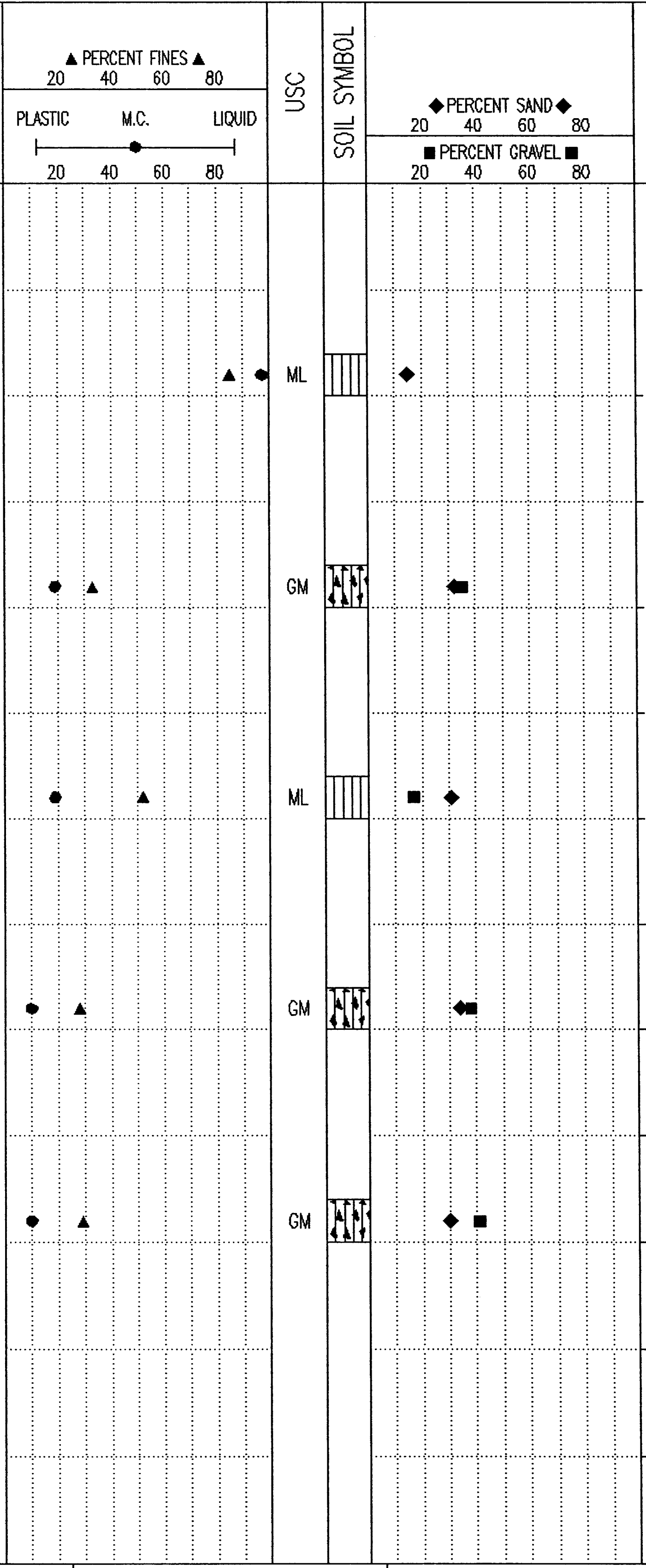
Government of Yukon Transportation Engineering	LOGGED BY: G.C. REVIEWED BY: Fig. No:
COMPLETION DEPTH: 4.7 m	COMPLETE: 00/05/10

02/02/15 08:54AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1314
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1744+962 19.8M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC			
	SILT (ML) -grey -frozen (Vx)	☒	85	ML
	SILTY GRAVEL WITH SAND (GM) -olive -frozen (Vx) -grindy drilling	☒	86	GM
2.0	SANDY SILT WITH GRAVEL (ML) -olive -frozen	☒	87	ML
3.0	SILTY GRAVEL WITH SAND (GM) -olive -frozen -smoother below 3.0m	☒	88	GM
		☒	89	GM
5.0	END HOLE @ 5.0m			



Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 00/04/27
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1315
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1745+049 14M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

SOIL DESCRIPTION

DEPTH (m) 0.0

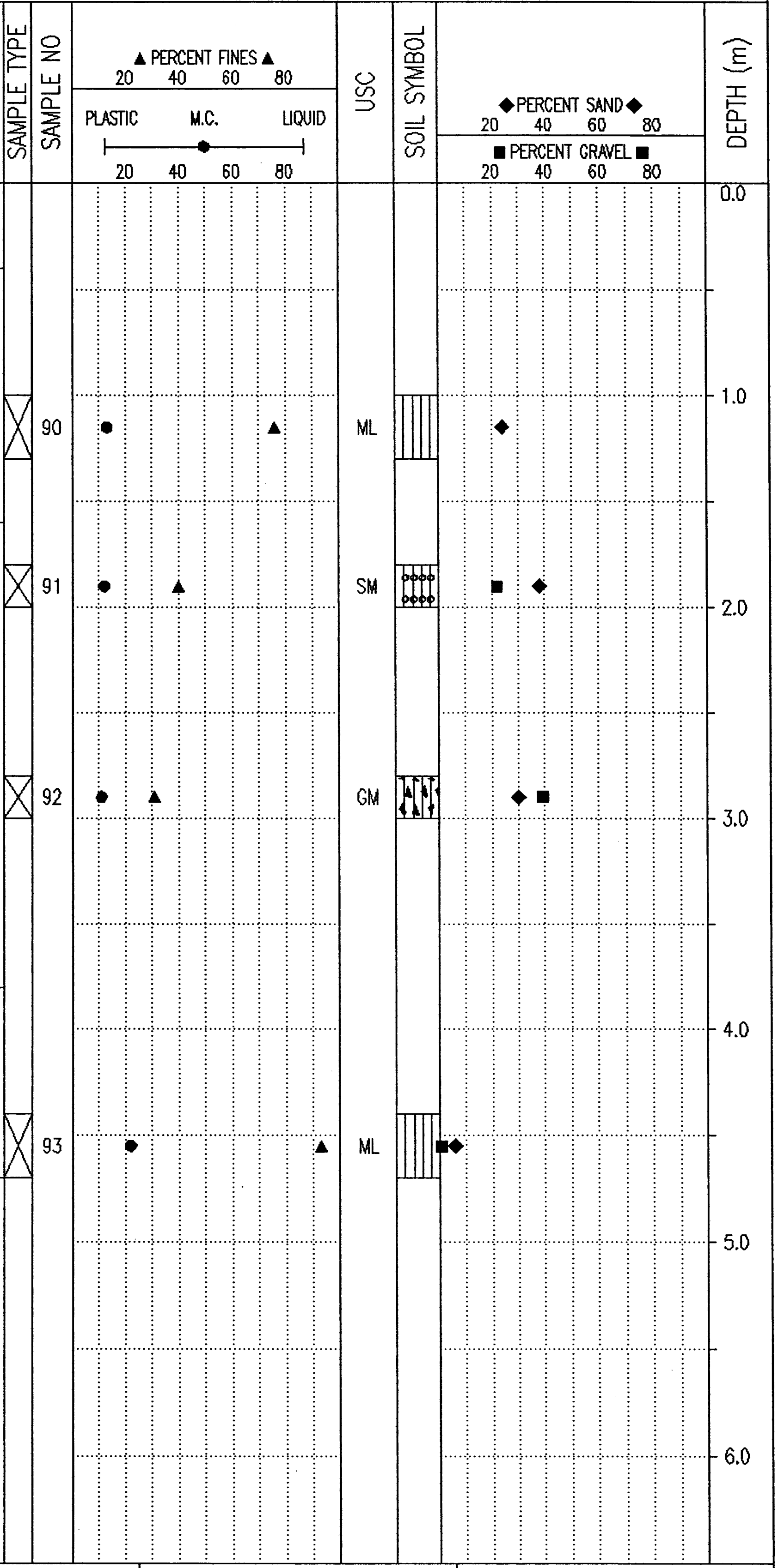
ORGANIC & ASH

SILT WITH SAND (ML)
- olive
- frozen (Nb)

SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM)
- olive
- frozen
- grindy drilling

SILT (ML)
- smooth drilling

END HOLE @ 4.7m



SAMPLE NO	USC
90	ML
91	SM
92	GM
93	ML

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	REVIEWED BY:	COMPLETE: 00/04/27
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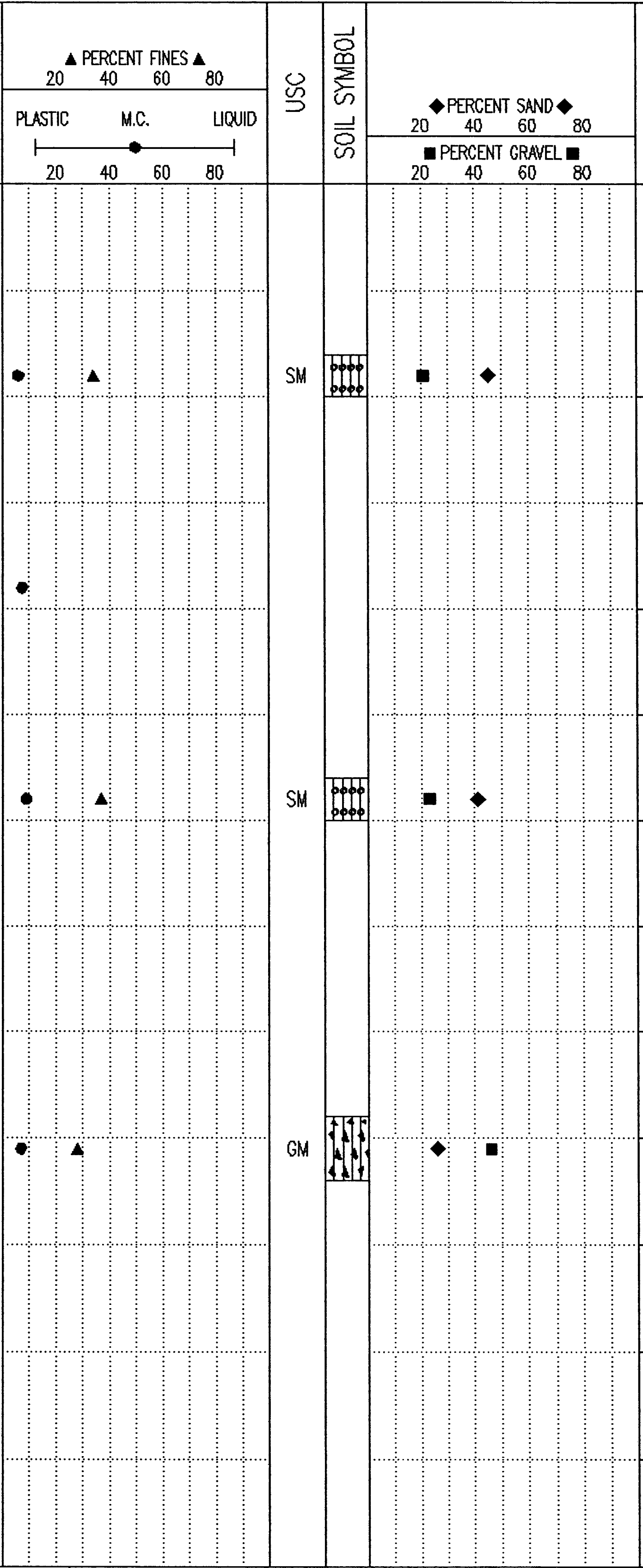
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541–1316
ENGINEERNG CAPITAL	KM 1729–1787 A/H	Project No: 092–202101–0361
B–40L	LOCATION: 1745+123 17M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
ORGANIC –could be old stripping piles			
SILT WITH SAND (SM) –olive –damp	☒	94	SM
ORGANIC –smooth easy drilling			
SANDY GRAVELLY SILT –moist –grindy @ 1.6m –lost sample # 95)	☒	95	
SILTY SAND WITH GRAVEL (SM) –olive –moist	☒	96	SM
SILTY GRAVEL WITH SAND (GM) –olive –moist –more rocks @ 3.3m	☒	97	GM
END HOLE @ 4.7M CPS Outlet			



DEPTH (m): 0.0, 1.0, 2.0, 3.0, 4.0, 5.0, 6.0

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	REVIEWED BY:	COMPLETE: 00/04/28
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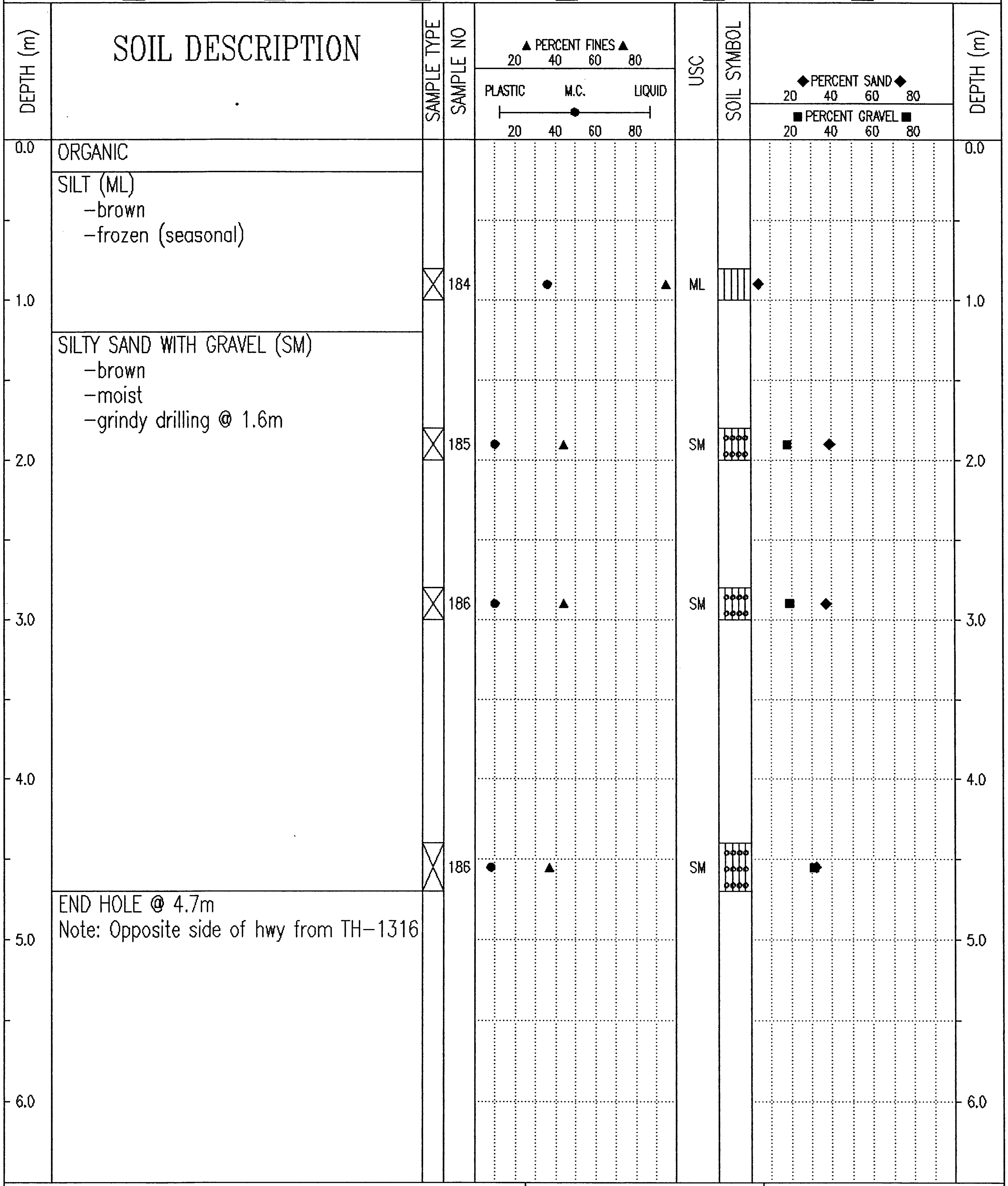
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1340
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1745+126 13.6M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ◨ CORE



ORGANIC

SILT (ML)
- brown
- frozen (seasonal)

SILTY SAND WITH GRAVEL (SM)
- brown
- moist
- grindy drilling @ 1.6m

END HOLE @ 4.7m
Note: Opposite side of hwy from TH-1316

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	REVIEWED BY:	COMPLETE: 00/05/10
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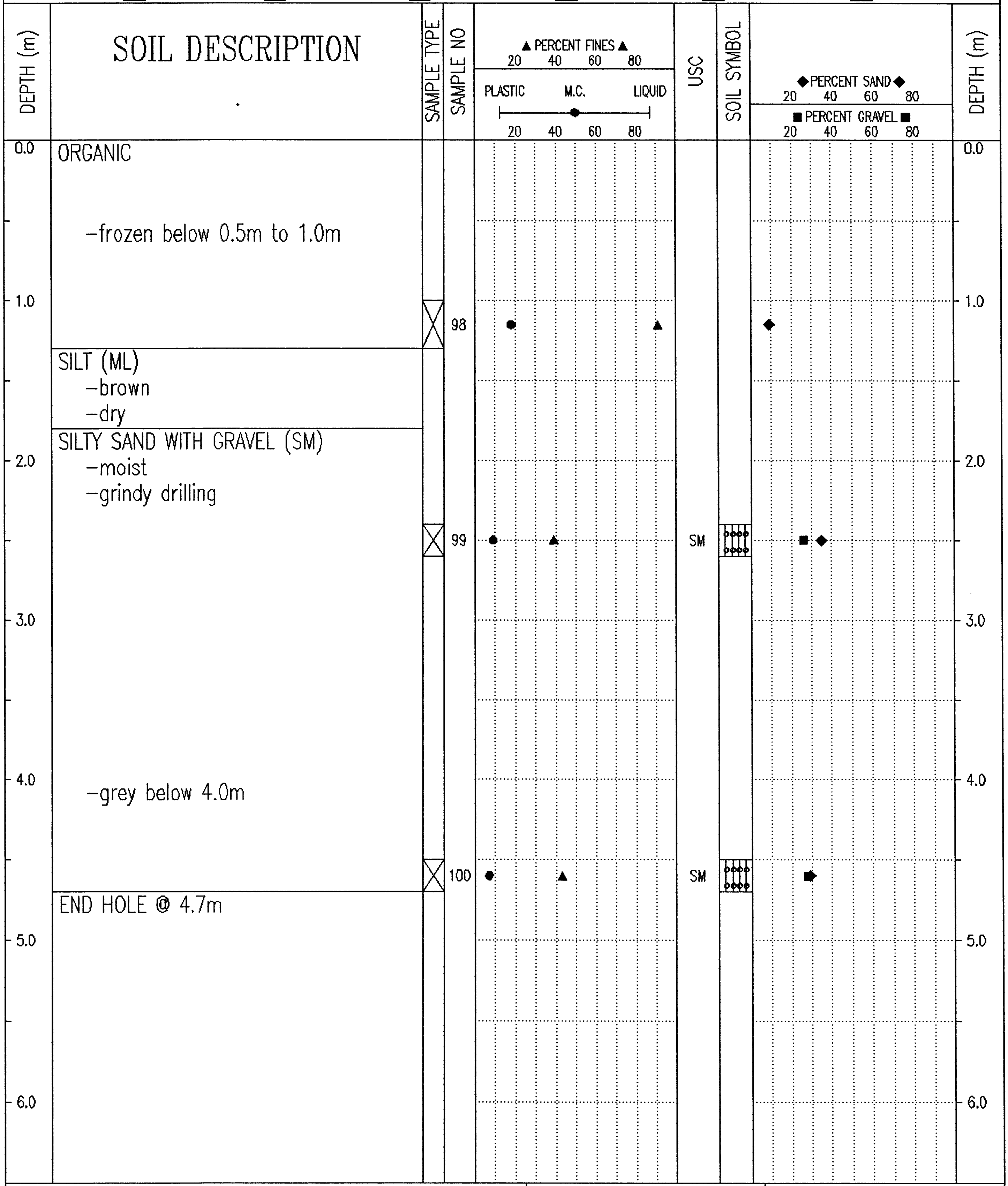
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1317
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1745+207 6.3M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◸ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



ORGANIC

-frozen below 0.5m to 1.0m

SILT (ML)
-brown
-dry

SILTY SAND WITH GRAVEL (SM)
-moist
-grindy drilling

-grey below 4.0m

END HOLE @ 4.7m

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REVIEWED BY:	COMPLETE: 00/04/28
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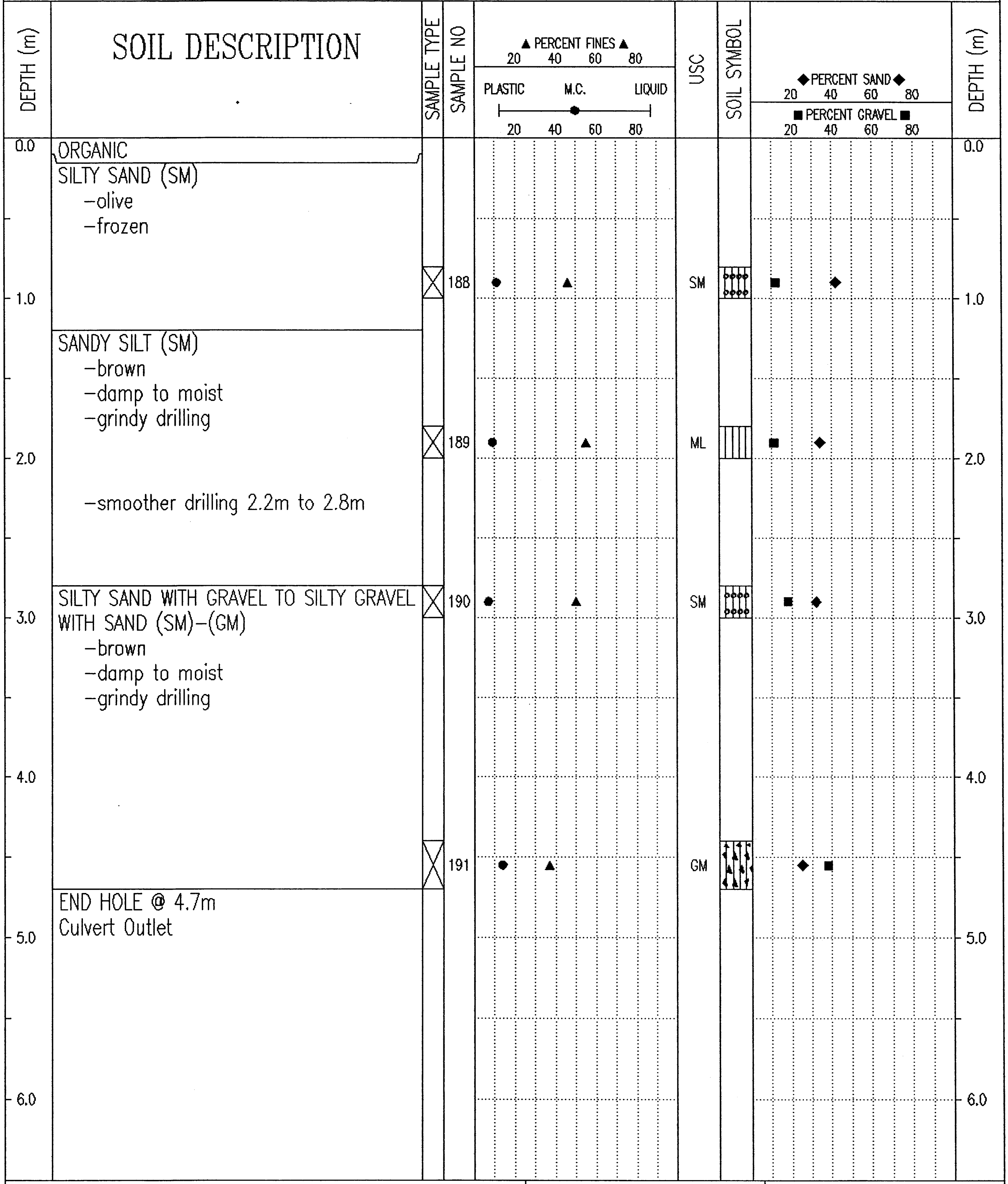
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543–1341
ENGINEERNG CAPITAL	KM 1729–1787 A/H	Project No: 092–202101–0361
B–40L	LOCATION: 1745+262 12M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



ORGANIC

SILTY SAND (SM)
- olive
- frozen

SANDY SILT (SM)
- brown
- damp to moist
- grindy drilling

- smoother drilling 2.2m to 2.8m

SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)–(GM)
- brown
- damp to moist
- grindy drilling

END HOLE @ 4.7m
Culvert Outlet

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	REVIEWED BY:	COMPLETE: 00/05/10
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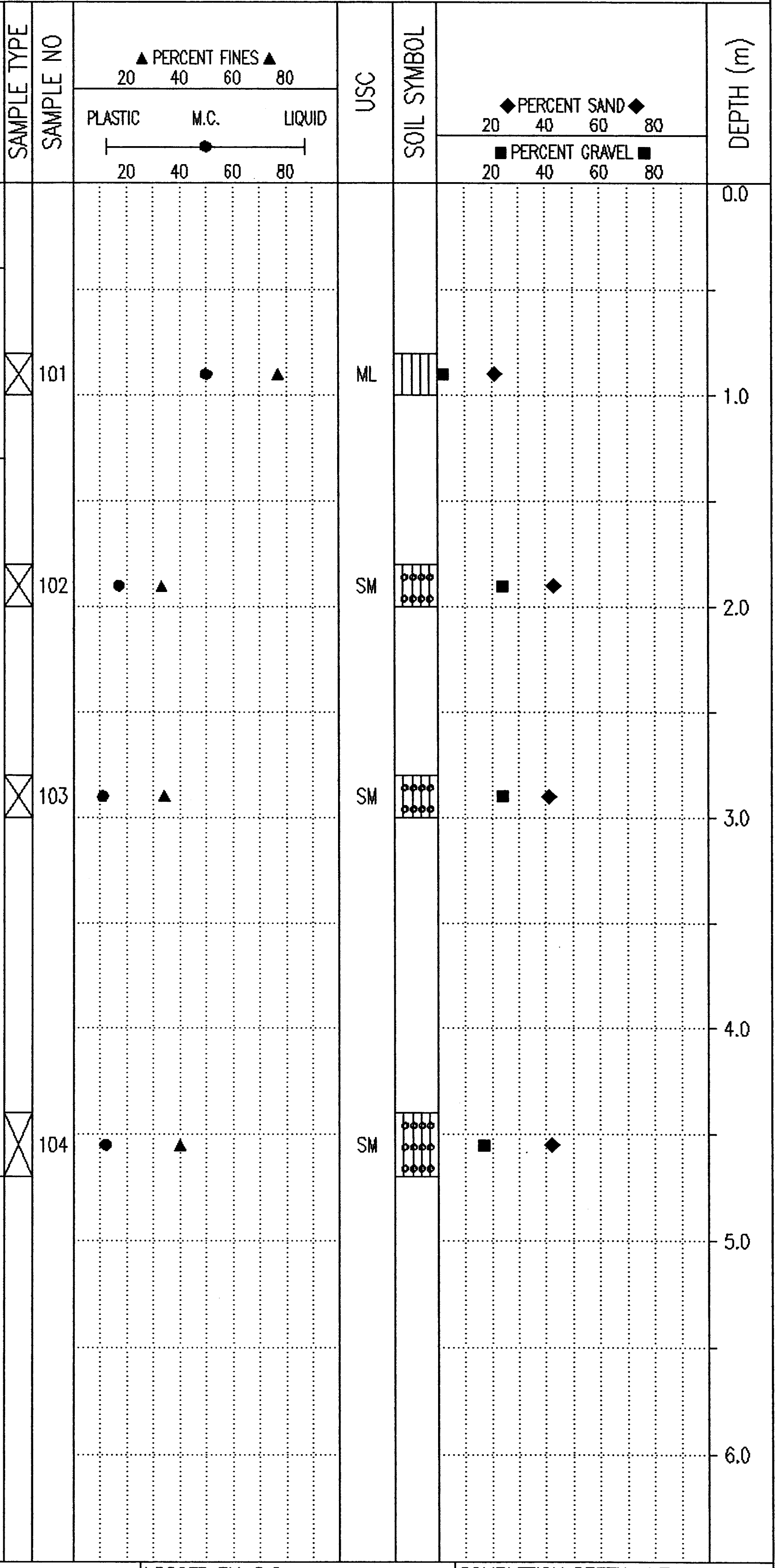
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1318
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1745+305 26.4M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	ORGANIC -frozen
	SILT WITH SAND (SM) -frozen
1.0	
	SILTY SAND WITH GRAVEL (SM) -olive -frozen (Vx) -grinding @ 1.3m
2.0	-more rocks @ 2.0m
3.0	
4.0	
	END HOLE @ 4.7m
5.0	
6.0	



LOGGED BY: G.C.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/04/28
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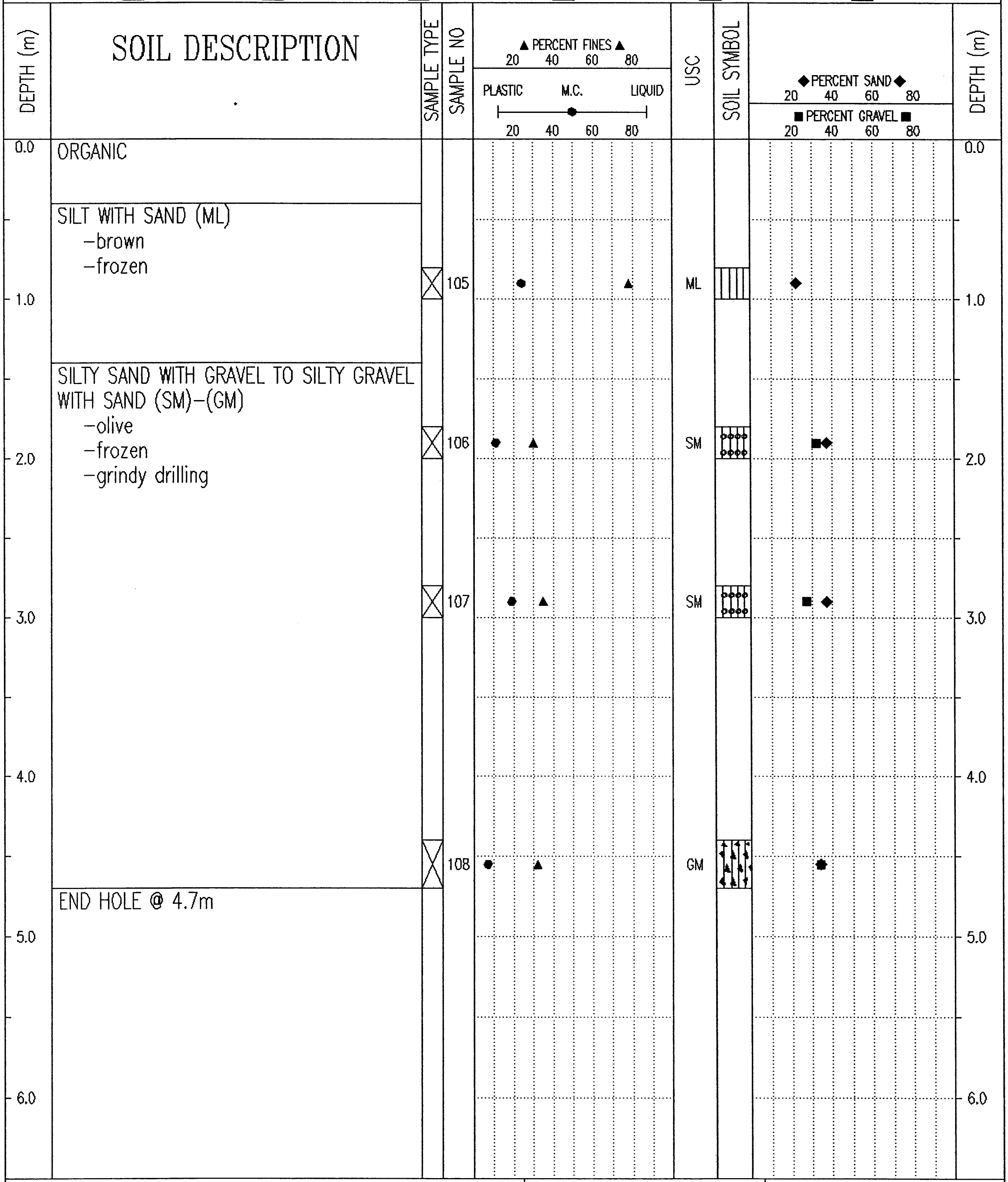
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1319
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1745+400 5.7 LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



ORGANIC

SILT WITH SAND (ML)
- brown
- frozen

SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM)
- olive
- frozen
- grindy drilling

END HOLE @ 4.7m

SAMPLE TYPE	SAMPLE NO	USC
☒	105	ML
☒	106	SM
☒	107	SM
☒	108	GM

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	REVIEWED BY:	COMPLETE: 00/04/28
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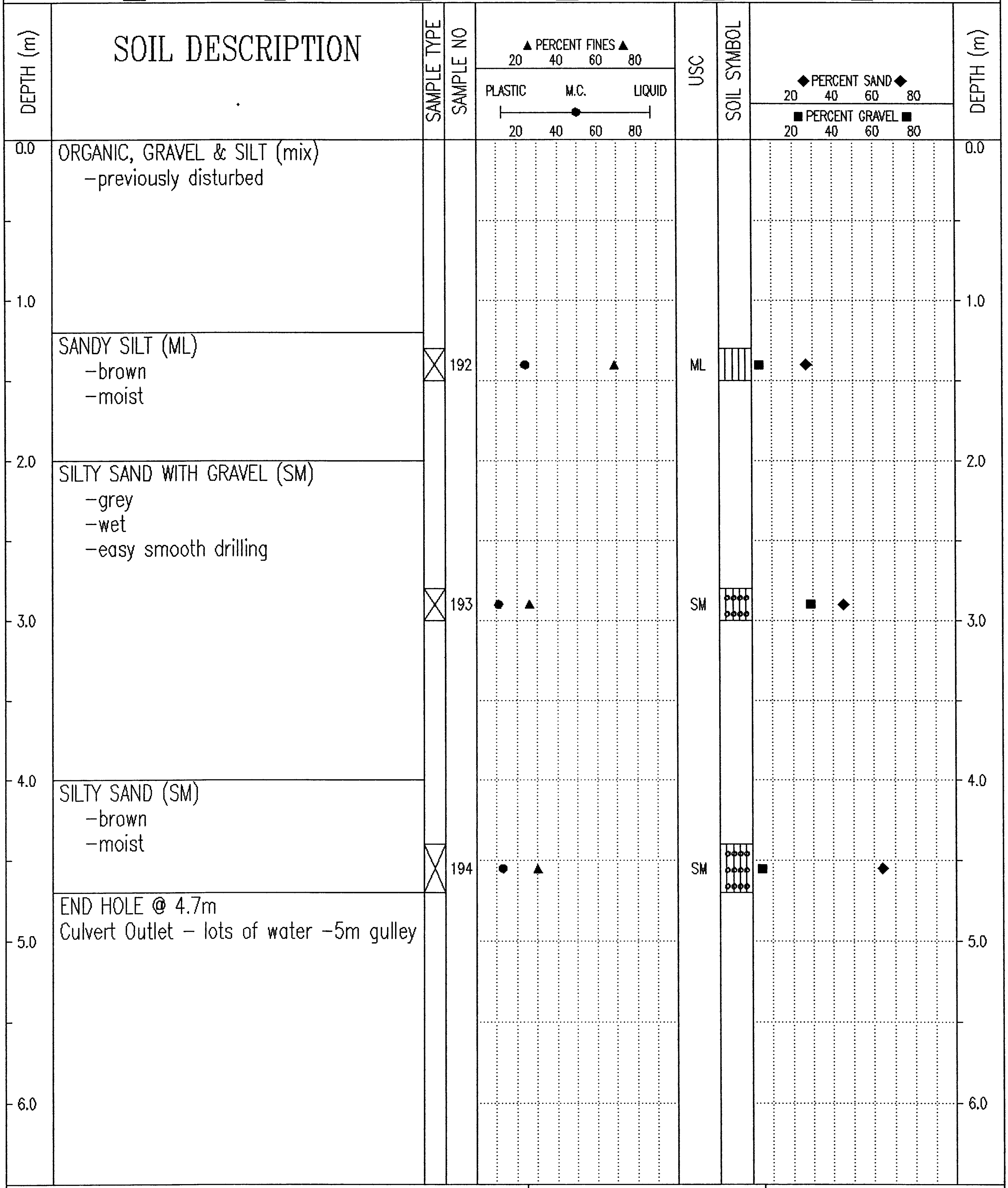
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1342
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1745+491 21.6M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



ORGANIC, GRAVEL & SILT (mix)
-previously disturbed

SANDY SILT (ML)
-brown
-moist

SILTY SAND WITH GRAVEL (SM)
-grey
-wet
-easy smooth drilling

SILTY SAND (SM)
-brown
-moist

END HOLE @ 4.7m
Culvert Outlet – lots of water -5m gulley

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	REVIEWED BY:	COMPLETE: 00/05/10
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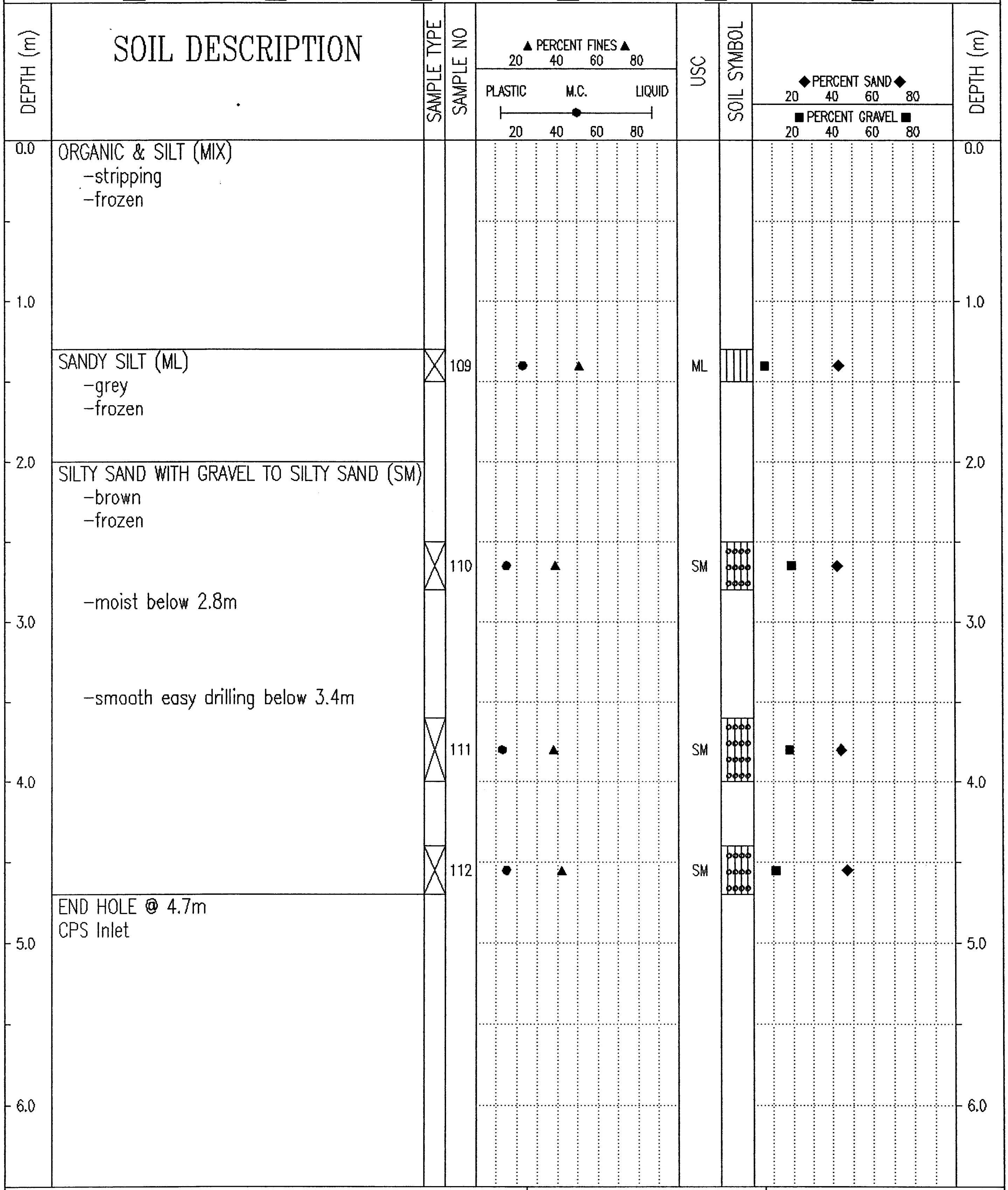
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1320
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1745+499 16M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◸ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC & SILT (MIX) -stripping -frozen			
1.3	SANDY SILT (ML) -grey -frozen	AUGER	109	ML
2.0	SILTY SAND WITH GRAVEL TO SILTY SAND (SM) -brown -frozen	AUGER	110	SM
	-moist below 2.8m			
	-smooth easy drilling below 3.4m	AUGER	111	SM
		AUGER	112	SM
4.7	END HOLE @ 4.7m CPS Inlet			

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	REVIEWED BY:	COMPLETE: 00/04/28
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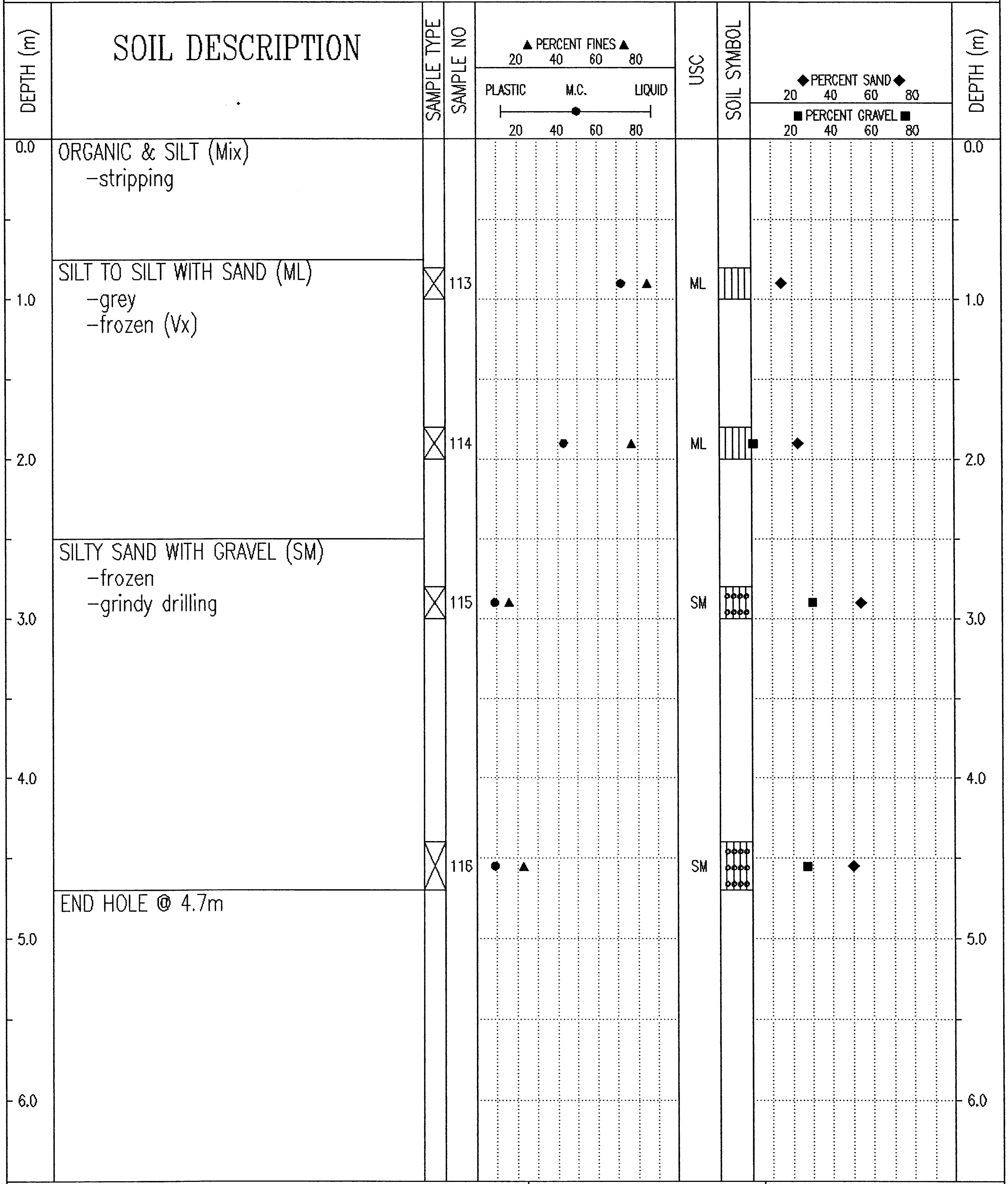
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1321
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1745+583 13.8M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ◨ CORE



ORGANIC & SILT (Mix)
-stripping

SILT TO SILT WITH SAND (ML)
-grey
-frozen (Vx)

SILTY SAND WITH GRAVEL (SM)
-frozen
-grindy drilling

END HOLE @ 4.7m

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	REVIEWED BY:	COMPLETE: 00/04/28
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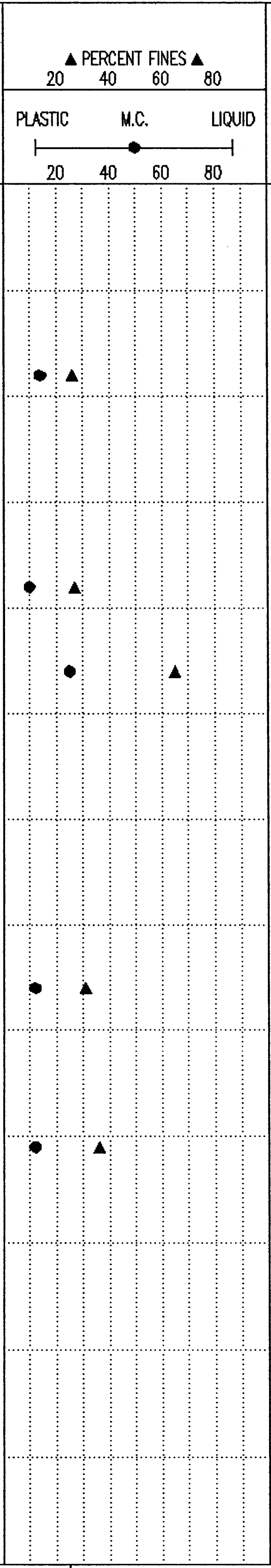
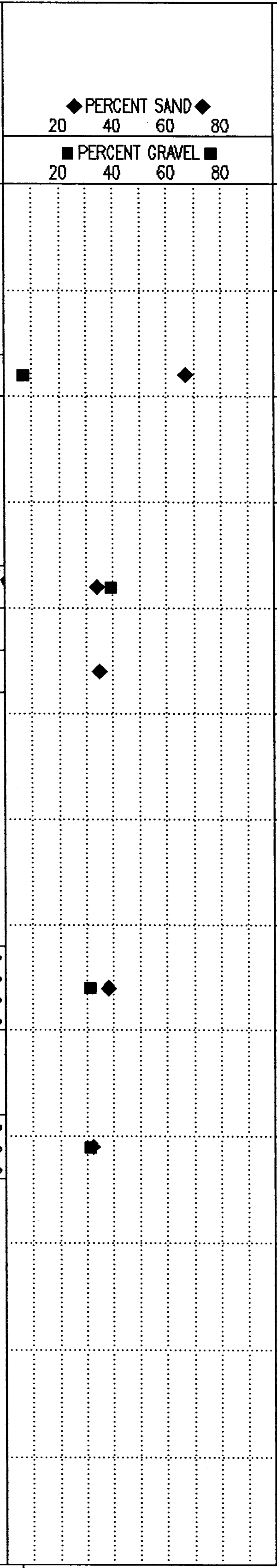
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1343
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1745+631 16.4M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC			
	SILTY SAND (SM) -brown -frozen (seasonal)	☒	195	SM
1.0	SILTY GRAVEL WITH SAND (GM) -damp	☒	196	GM
2.0	SANDY SILT (ML) -brown -damp	☒	197	ML
3.0	SILTY SAND WITH GRAVEL (SM) -brown -wet	☒	198	SM
4.0	-rough drilling below 4.0m	☒	199	SM
5.0	END HOLE @ 4.7m CPS Outlet			
6.0				





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REVIEWED BY:	COMPLETE: 00/05/10
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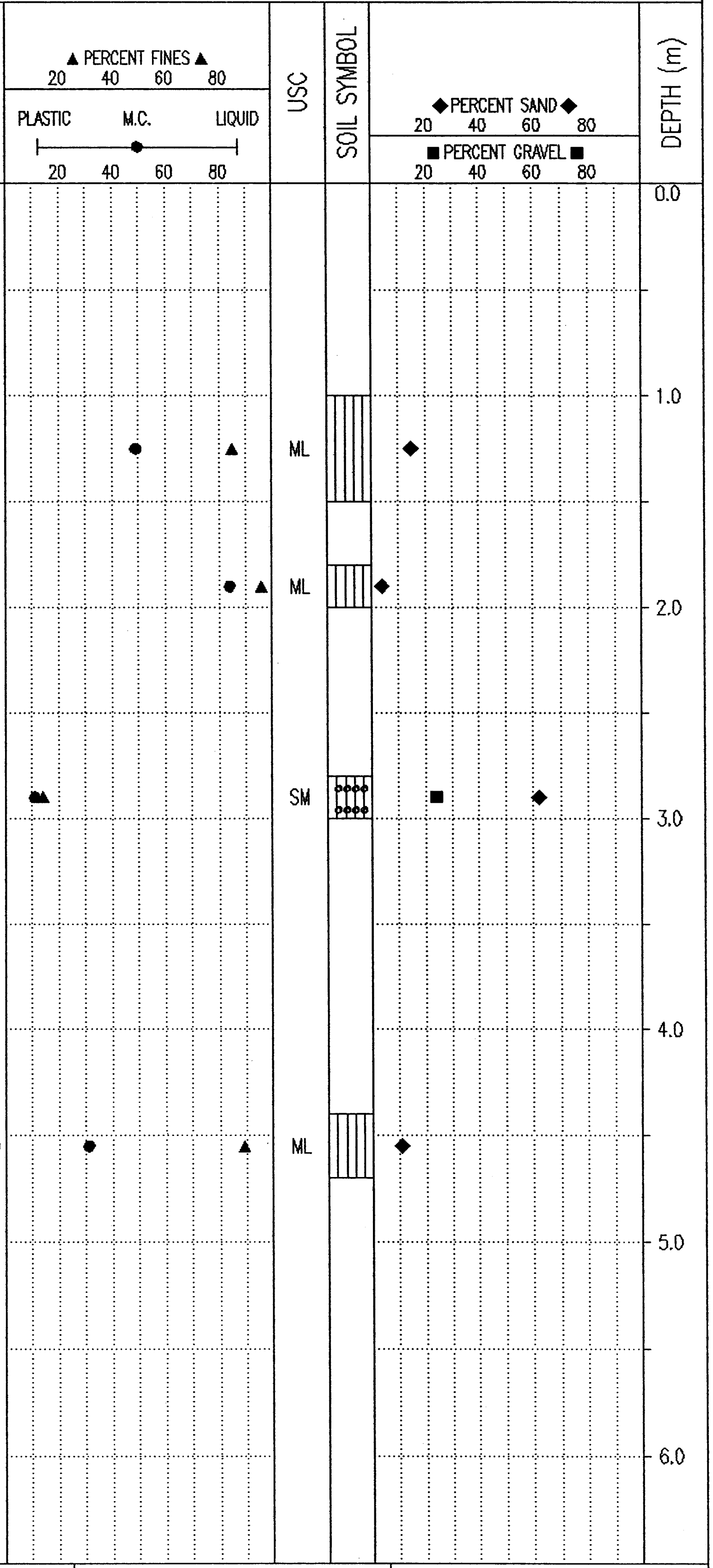
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1322
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1745+752 9.9M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC & ICE -stripping -frozen			
1.0	SILT (ML) -olive -frozen (Vx)	☒	117	ML
		☒	118	ML
	SILTY SAND WITH GRAVEL (SM) -frozen -grindy drilling	☒	119	SM
	SILT (ML) -brown -frozen (Vx) -tight drilling	☒	120	ML
	END HOLE @ 4.7m			



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	REVIEWED BY:	COMPLETE: 00/04/28
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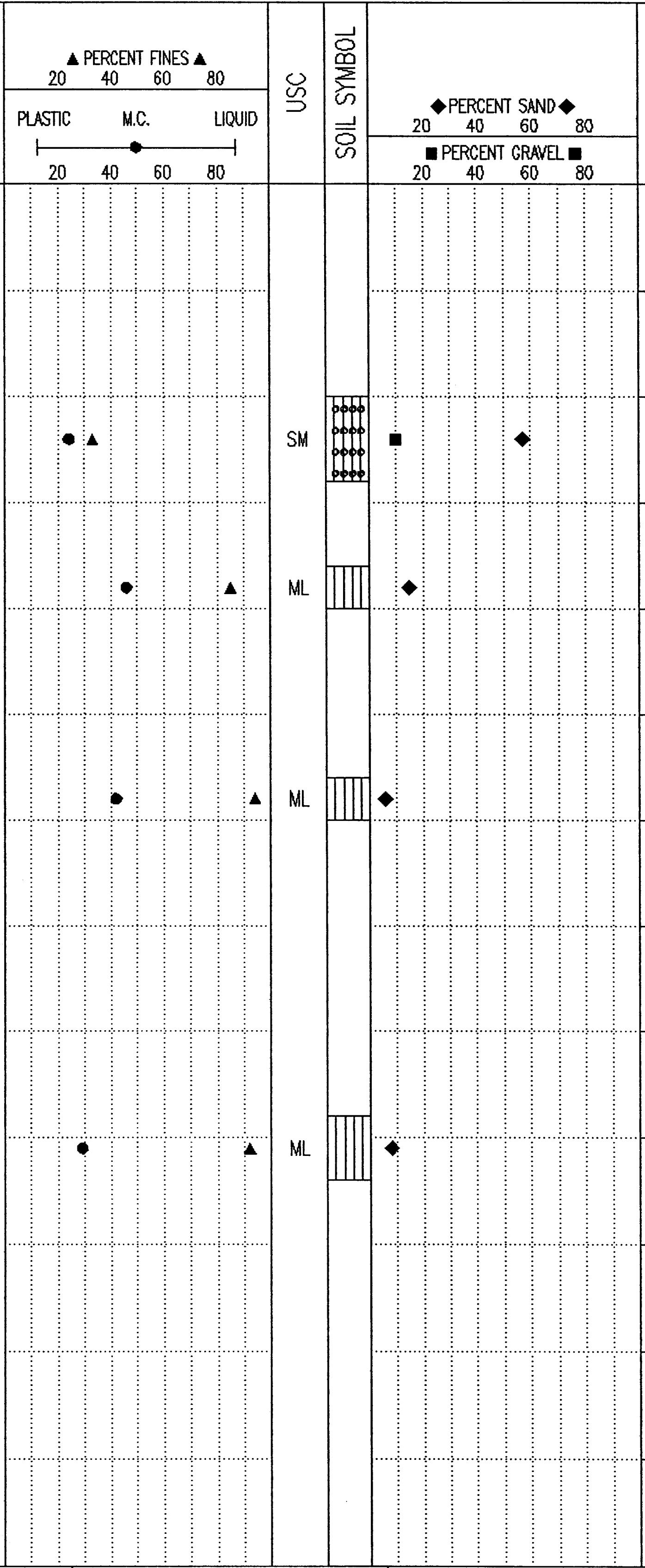
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1323
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1745+865 4.4m LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC -stripping piles -frozen below 0.5m			
1.0	SILTY SAND (SM) -brown -frozen (Vx)	☒	121	SM
2.0	SILT (ML) -brown -frozen (Vx)	☒	122	ML
	-easier drilling below 2.5m			
3.0		☒	123	ML
4.0		☒	124	ML
	END HOLE @ 4.7m			
5.0				
6.0				



Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/04/28
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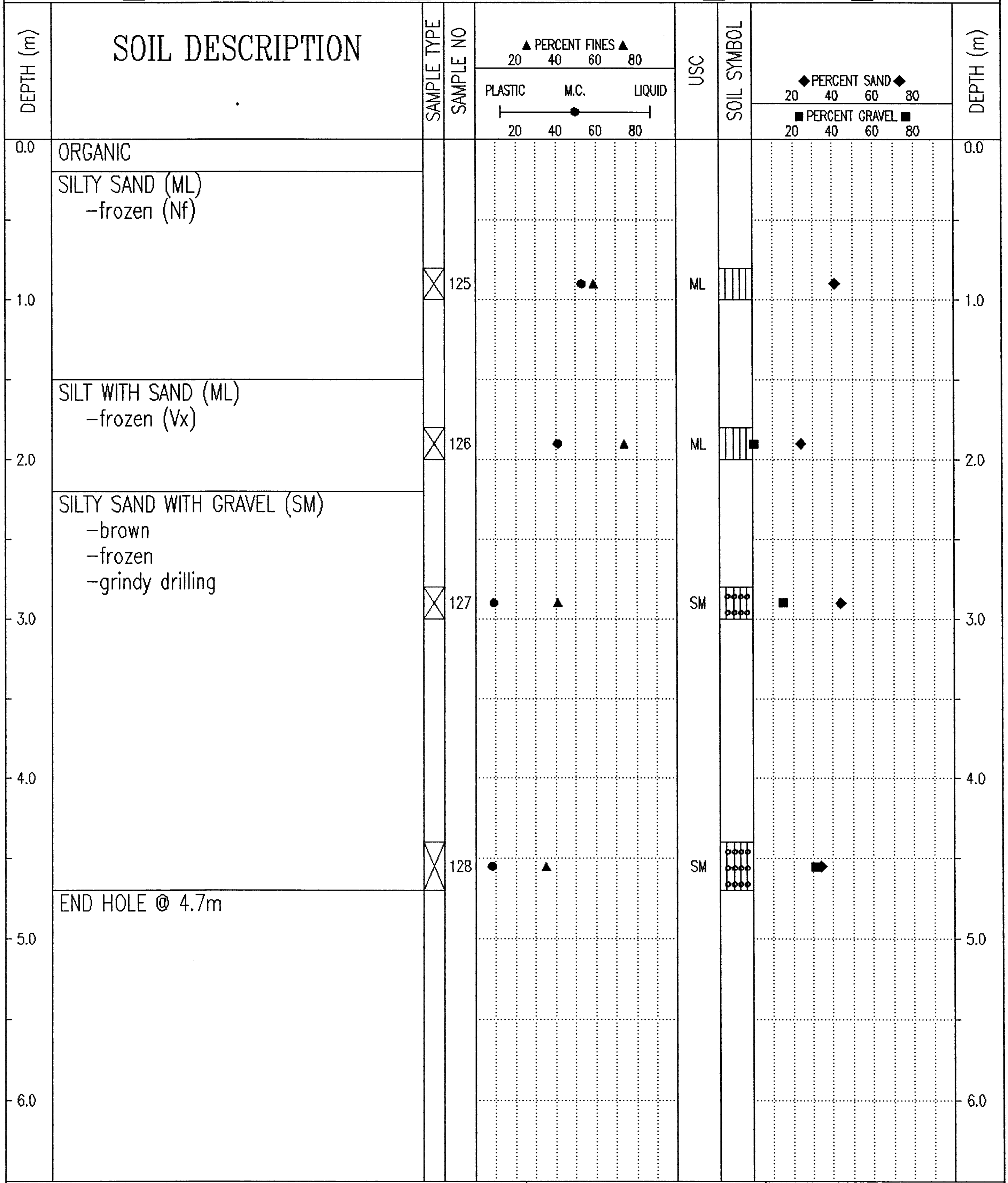
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1324
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1745+970 3.7M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ◨ CORE



Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/04/28
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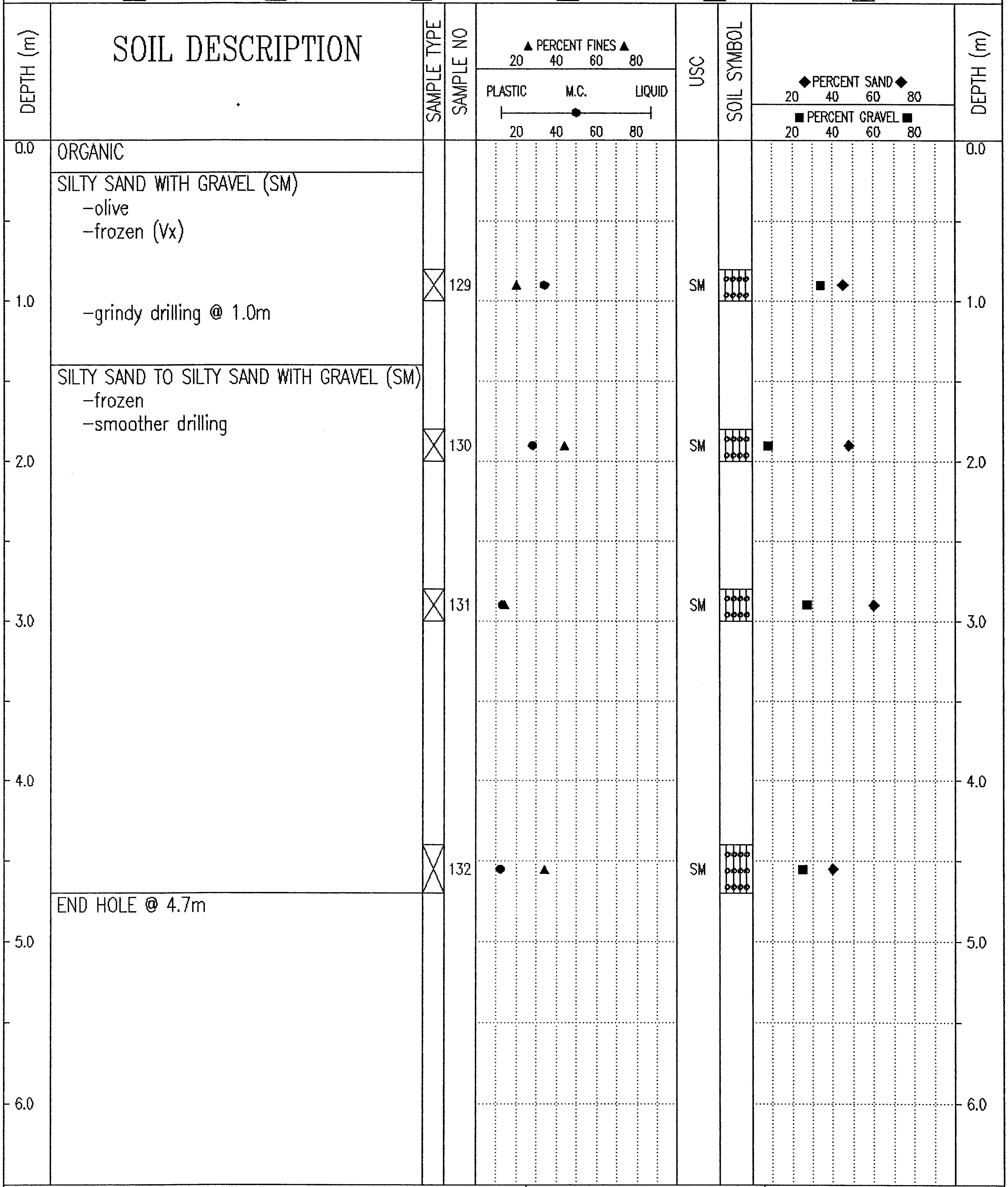
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541–1325
ENGINEERNG CAPITAL	KM 1729–1787 A/H	Project No: 092–202101–0361
B–40L	LOCATION: 1746+049 4.7M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ◨ CORE



0.0 ORGANIC

SILTY SAND WITH GRAVEL (SM)
- olive
- frozen (Vx)
- grindy drilling @ 1.0m

SILTY SAND TO SILTY SAND WITH GRAVEL (SM)
- frozen
- smoother drilling

END HOLE @ 4.7m

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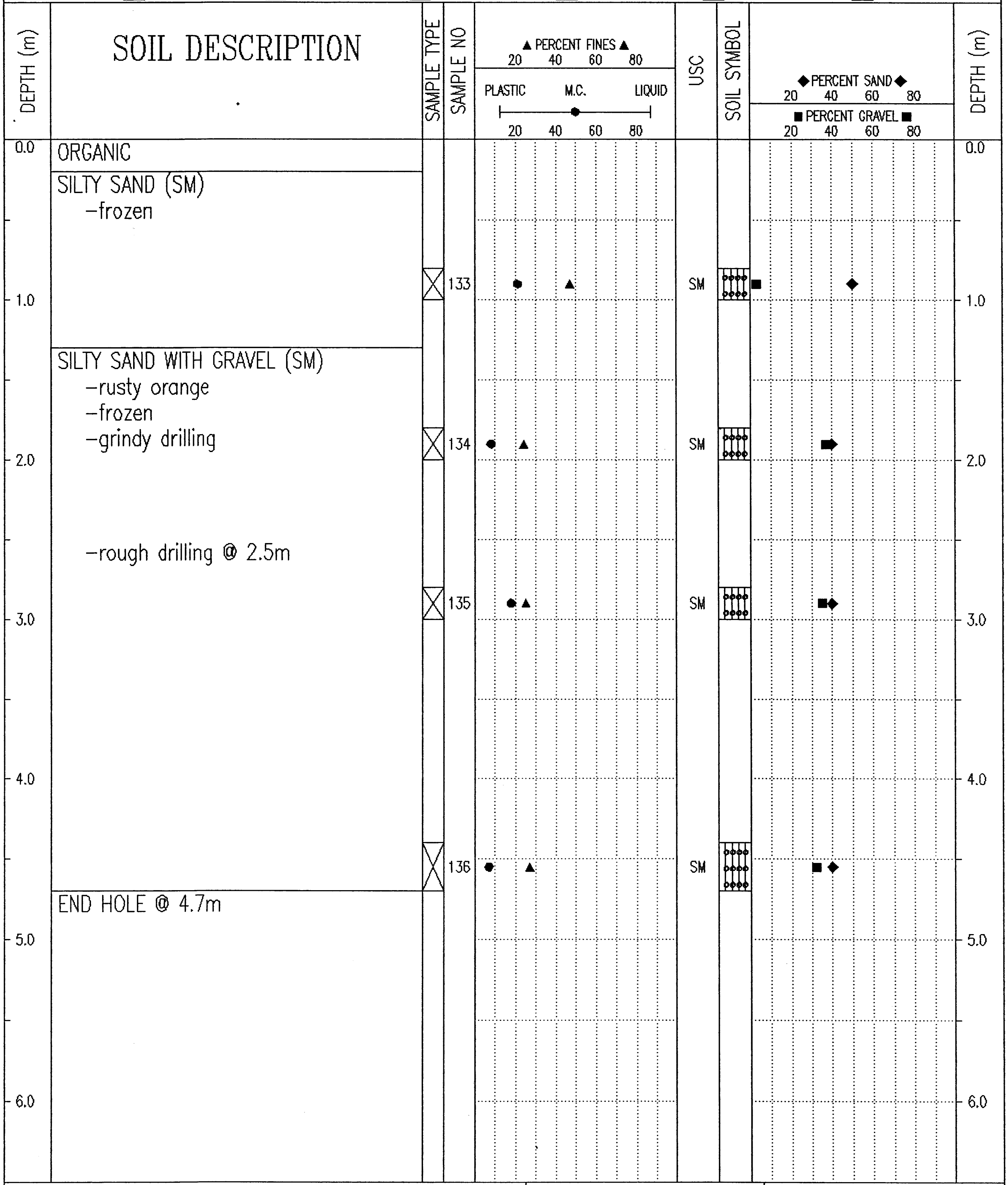
	REVIEWED BY:
	Fig. No:
COMPLETION DEPTH: 4.7 m	COMPLETE: 00/04/28

02/02/18 08:11AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 541-1326
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1746+146 3.9M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



ORGANIC

SILTY SAND (SM)
-frozen

SILTY SAND WITH GRAVEL (SM)
-rusty orange
-frozen
-grindy drilling

-rough drilling @ 2.5m

END HOLE @ 4.7m

SAMPLE TYPE	SAMPLE NO	USC
☒	133	SM
☒	134	SM
☒	135	SM
☒	136	SM

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LOGGED BY: G.C.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/04/28
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 542-1327
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1746+147 9.0M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC -frozen			
	SILT WITH SAND (ML) -olive -frozen -grinding @ 0.8m -frozen (Vx) below 1.2m	☒ ☒	137 138	ML ML
	SILTY SAND WITH GRAVEL (SM) -olive -frozen (Vc)	☒	139	SM
	SILTY GRAVEL WITH SAND (GM) -olive -frozen -more gravel below 3.5m	☒	140	GM
	END HOLE @ 4.7m CPS Outlet			

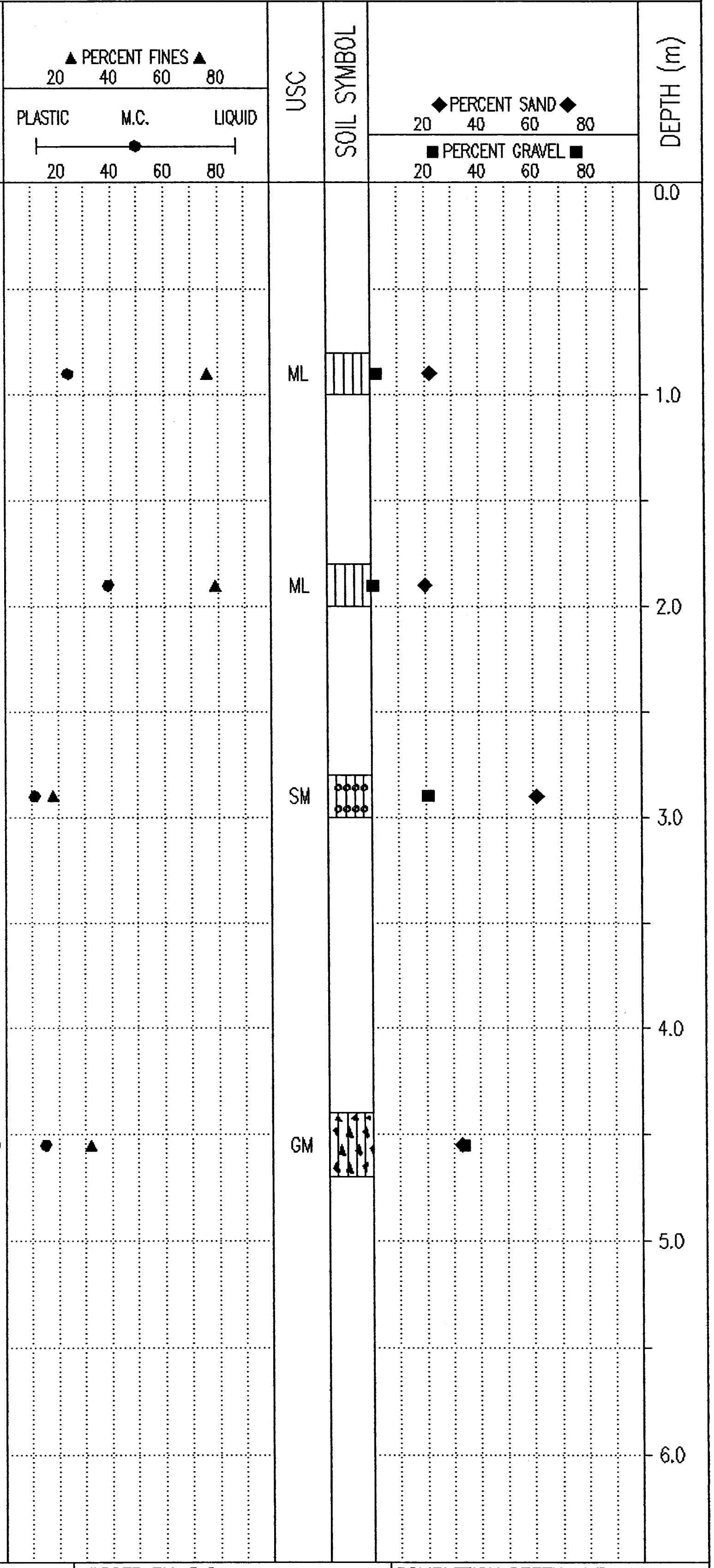

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Fig. No:
COMPLETION DEPTH: 4.7 m
COMPLETE: 00/05/02

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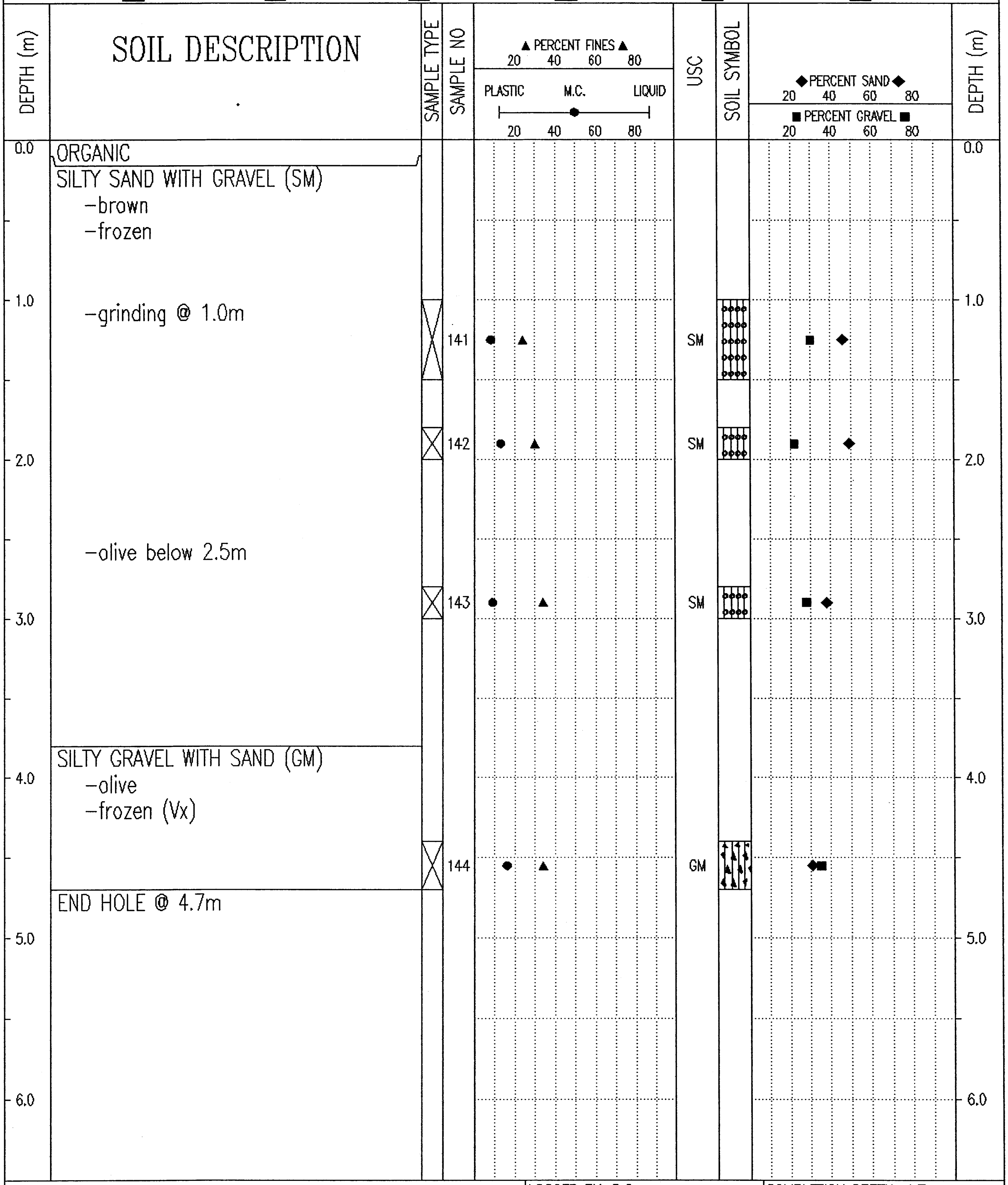
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 542–1328
ENGINEERNG CAPITAL	KM 1729–1787 A/H	Project No: 092–202101–0361
B–40L	LOCATION: 1746+147 22.3M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



ORGANIC

SILTY SAND WITH GRAVEL (SM)
- brown
- frozen
- grinding @ 1.0m
- olive below 2.5m

SILTY GRAVEL WITH SAND (GM)
- olive
- frozen (Vx)

END HOLE @ 4.7m

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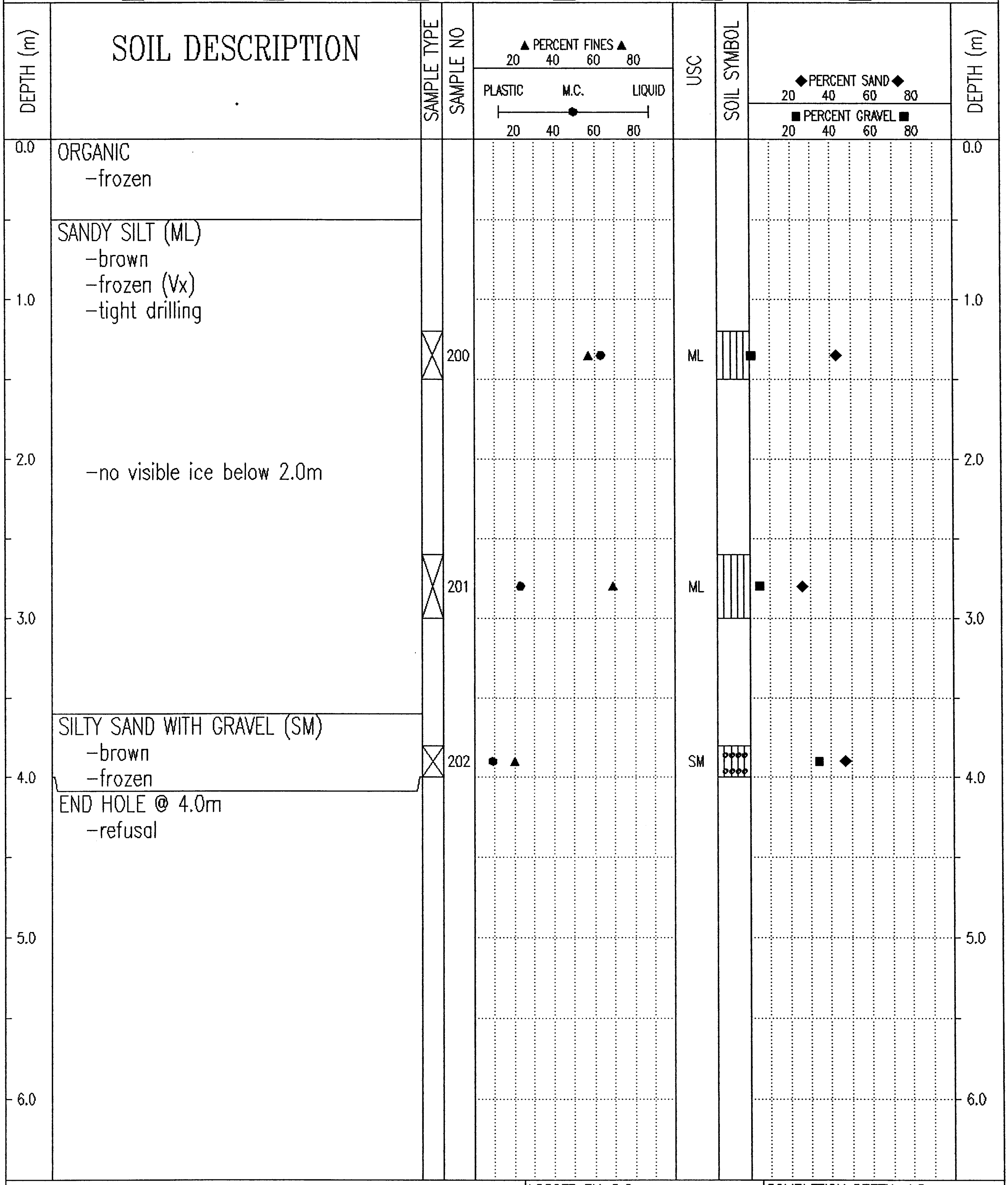
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1344
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1746+204 4.3M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



ORGANIC
-frozen

SANDY SILT (ML)
-brown
-frozen (Vx)
-tight drilling

-no visible ice below 2.0m

SILTY SAND WITH GRAVEL (SM)
-brown
-frozen

END HOLE @ 4.0m
-refusal

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	REVIEWED BY:	COMPLETE: 00/05/10
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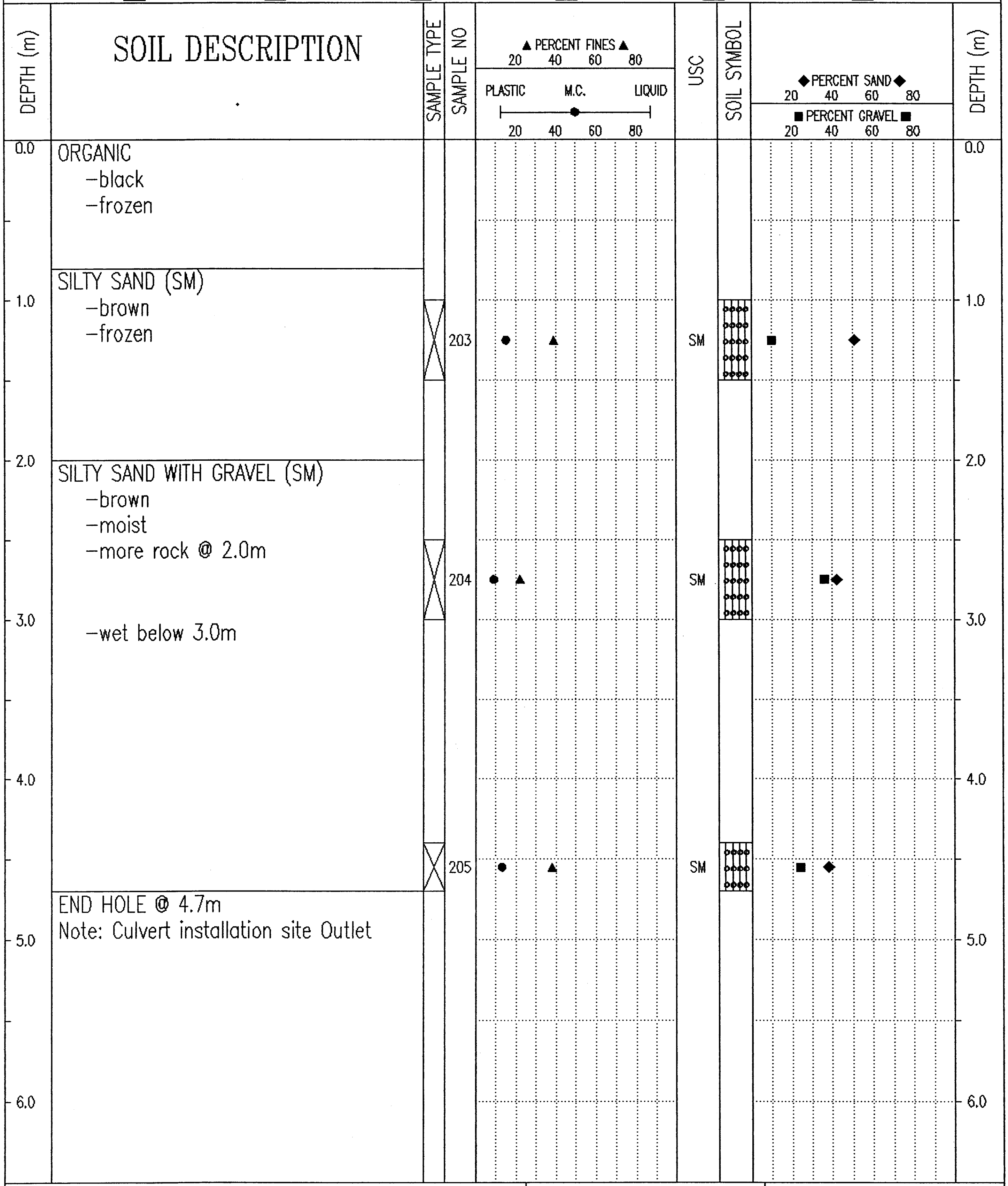
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1345
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1746+264 18.4M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



ORGANIC
-black
-frozen

SILTY SAND (SM)
-brown
-frozen

SILTY SAND WITH GRAVEL (SM)
-brown
-moist
-more rock @ 2.0m

-wet below 3.0m

END HOLE @ 4.7m
Note: Culvert installation site Outlet

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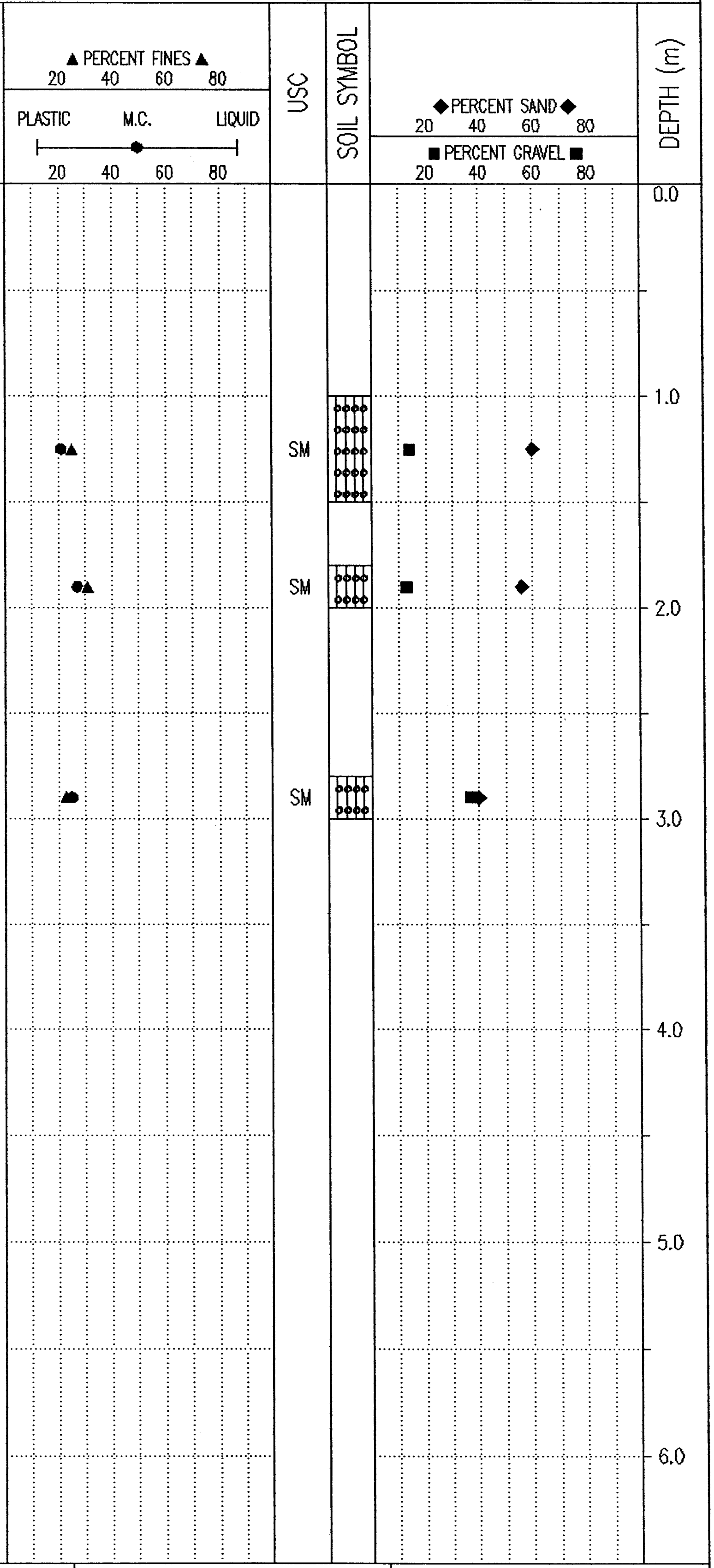
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543–1346
ENGINEERNG CAPITAL	KM 1729–1787 A/H	Project No: 092–202101–0361
B–40L	LOCATION: 1746+268 16M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◱ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ▮ CORE

SOIL DESCRIPTION

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC & SILT –frozen			
	SILTY SAND (SM) –frozen –water contamimated from surface	☒ AUGER	206	SM
	–sample #207 is more representative – less H20 contamination	☒ AUGER	207	SM
	SILTY SAND WITH GRAVEL (SM) –frozen –H20 contamination	☒ AUGER	208	SM
3.0	END HOLE @ 3.0m –refusal CMP Outlet			



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	REVIEWED BY:
	Fig. No:
COMPLETION DEPTH: 3.0 m	COMPLETE: 00/05/11

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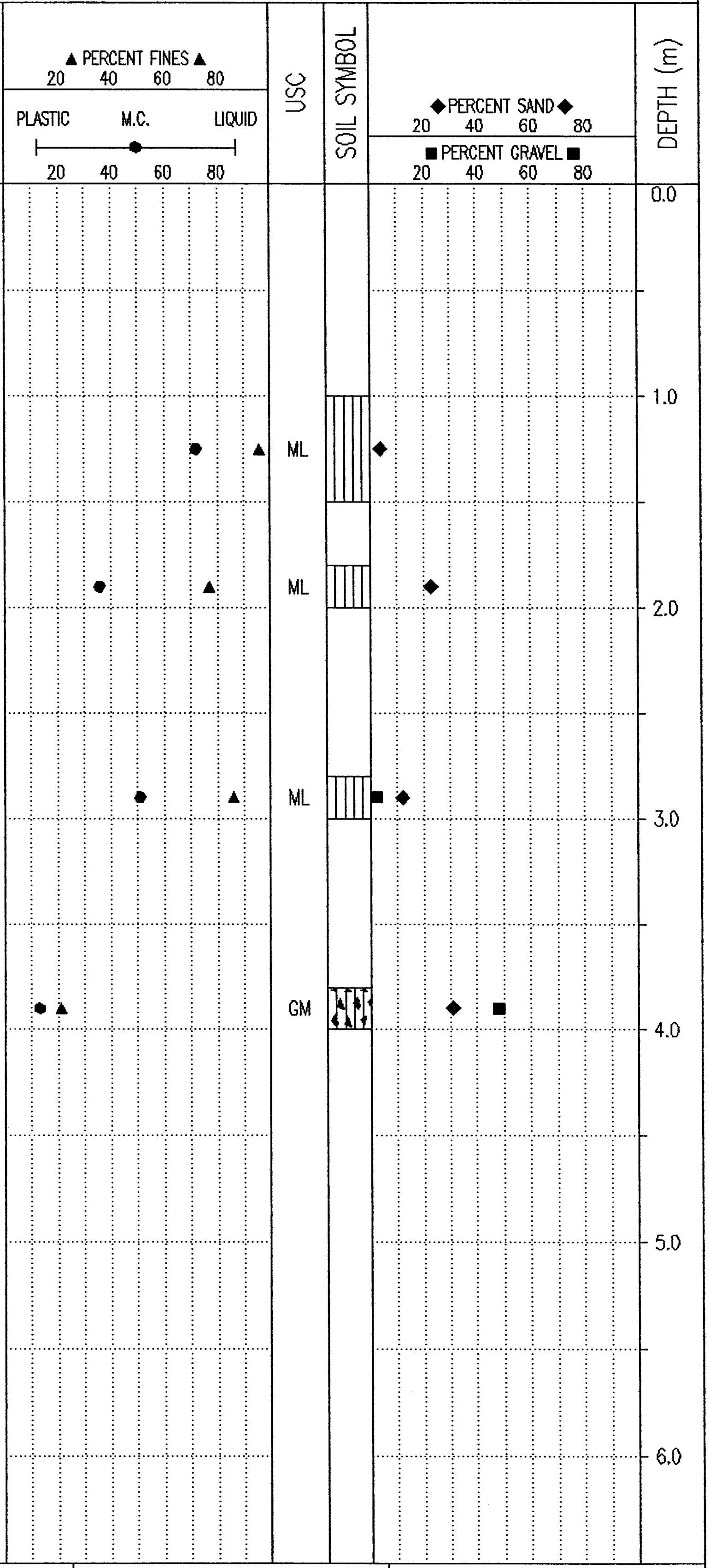
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1347
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1746+337 3.2M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▯ CORE

SOIL DESCRIPTION

SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
ORGANIC -frozen (Vx)			
SILT (ML) -brown -frozen -smooth drilling	☒	209	ML
SILT WITH SAND (ML) -brown -frozen - no visible ice -grinding @ 2.2m	☒	210	ML
SILT (ML) -with ice - estimate 50% -brown	☒	211	ML
SILTY GRAVEL WITH SAND (GM) -brown -frozen -rocks @ 3.8m - angular	☒	212	GM
END HOLE @ 4.0m -refusal			



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	REVIEWED BY:	COMPLETE: 00/05/11
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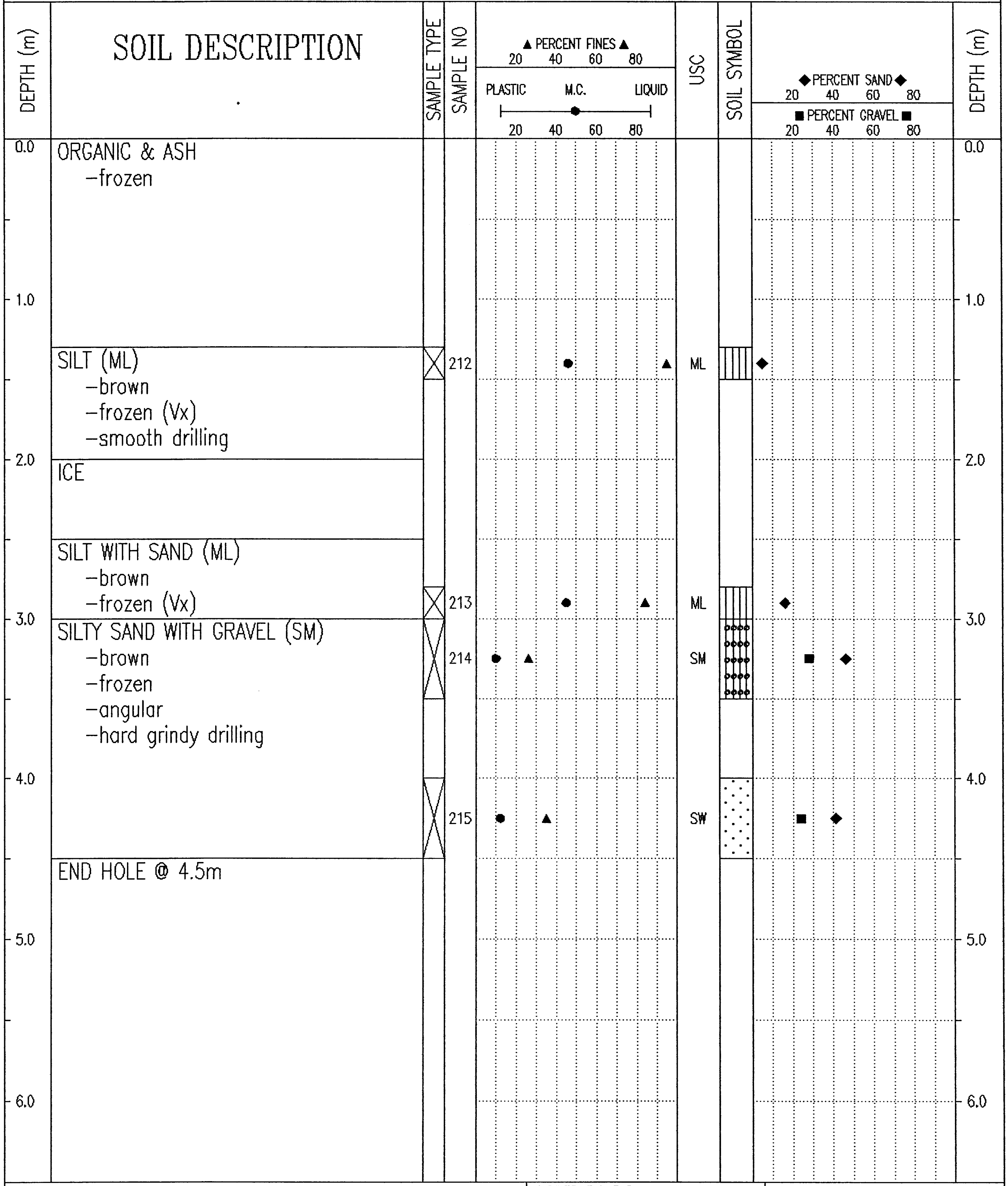
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1348
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1746+443 0.5M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ◨ CORE



SOIL DESCRIPTION	SAMPLE NO	USC
ORGANIC & ASH -frozen		
SILT (ML) -brown -frozen (Vx) -smooth drilling	212	ML
ICE		
SILT WITH SAND (ML) -brown -frozen (Vx)	213	ML
SILTY SAND WITH GRAVEL (SM) -brown -frozen -angular -hard grindy drilling	214 215	SM SW
END HOLE @ 4.5m		

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	REVIEWED BY:	COMPLETE: 00/05/11
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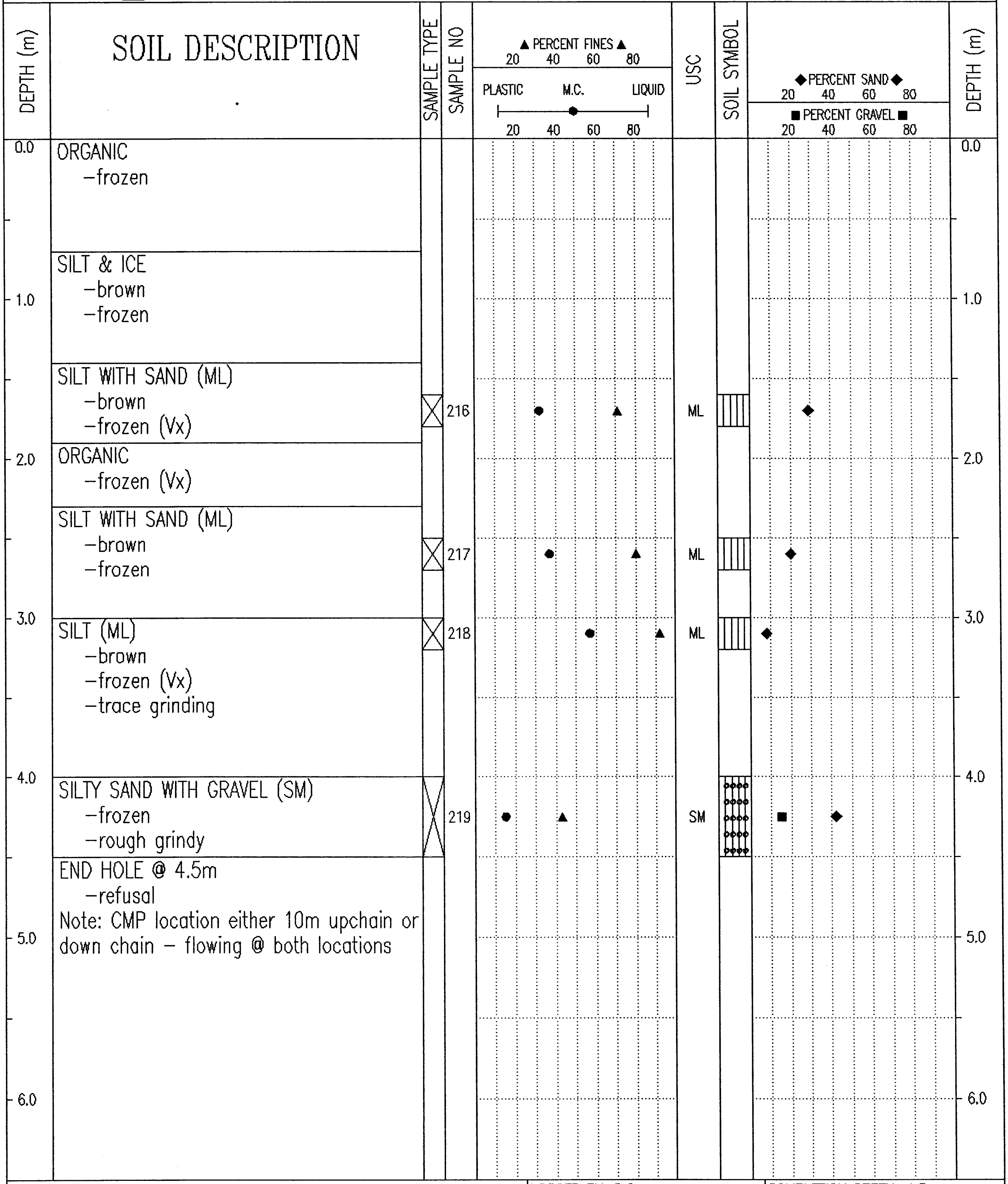
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1349
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1746+552 18.7M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
ORGANIC -frozen			
SILT & ICE -brown -frozen			
SILT WITH SAND (ML) -brown -frozen (Vx)	☒	216	ML
ORGANIC -frozen (Vx)			
SILT WITH SAND (ML) -brown -frozen	☒	217	ML
SILT (ML) -brown -frozen (Vx) -trace grinding	☒	218	ML
SILTY SAND WITH GRAVEL (SM) -frozen -rough grindy	☒	219	SM
END HOLE @ 4.5m -refusal Note: CMP location either 10m upchain or down chain - flowing @ both locations			



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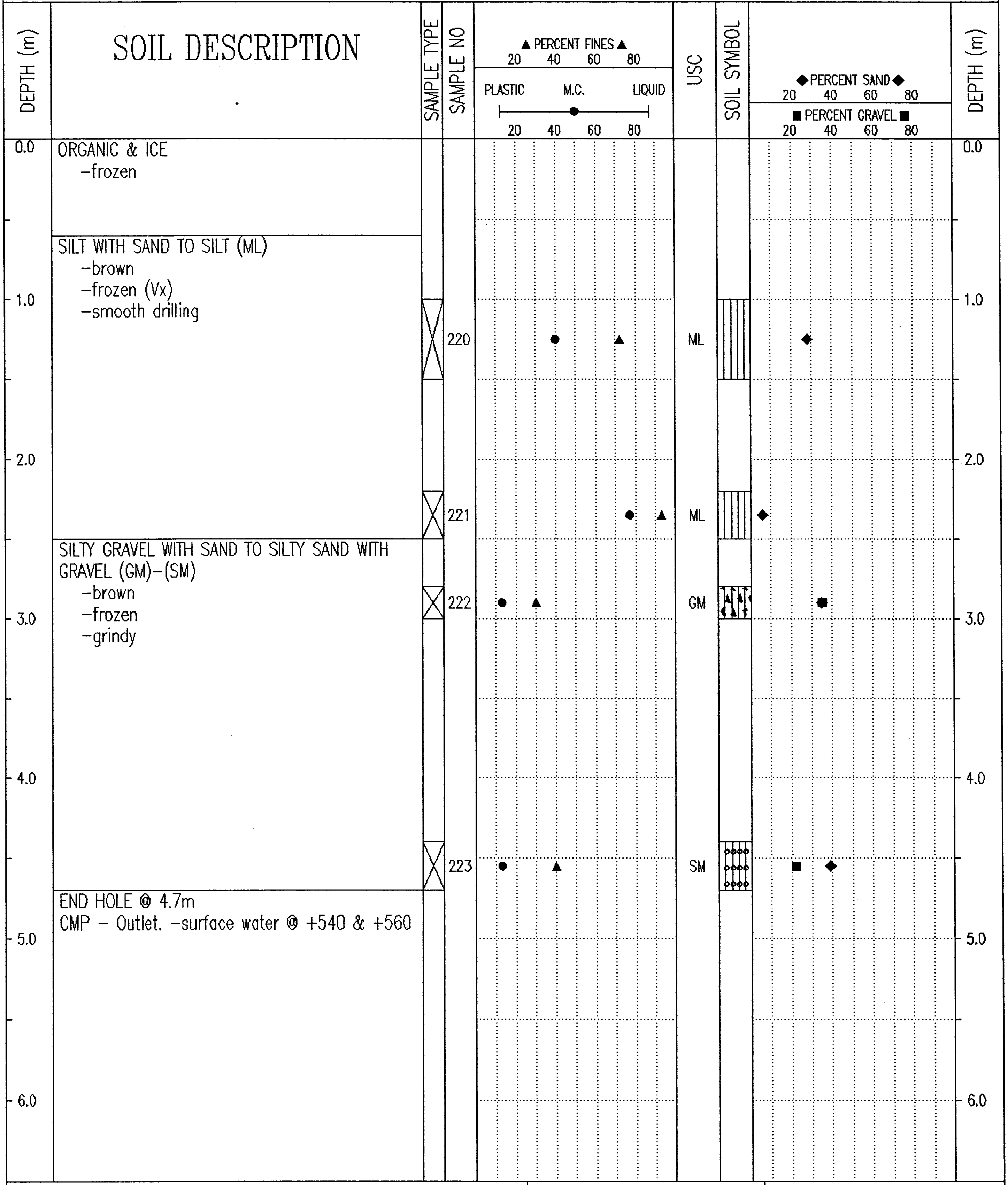
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1350
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1746+561 8.3M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

SOIL DESCRIPTION

DEPTH (m)	SOIL DESCRIPTION	SAMPLE NO	USC
0.0	ORGANIC & ICE -frozen		
	SILT WITH SAND TO SILT (ML) -brown -frozen (Vx) -smooth drilling	220 221	ML ML
	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -brown -frozen -grindy	222 223	GM SM
4.7	END HOLE @ 4.7m CMP - Outlet. -surface water @ +540 & +560		



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REVIEWED BY:	COMPLETE: 00/05/11
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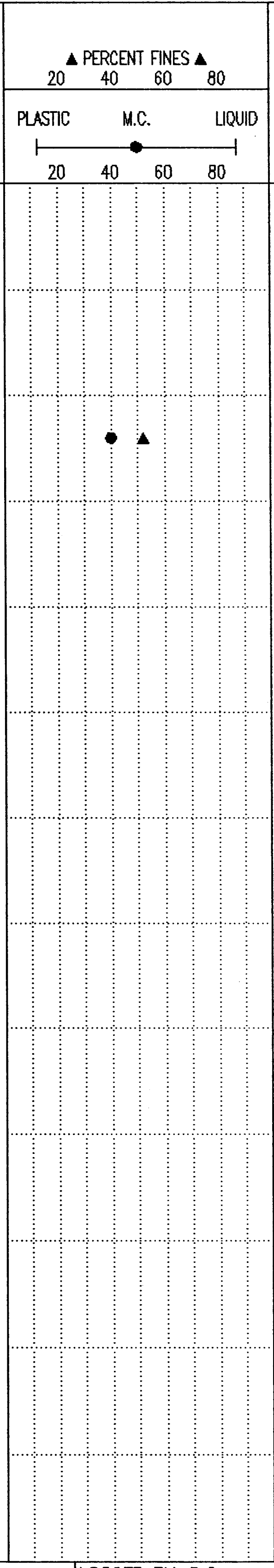
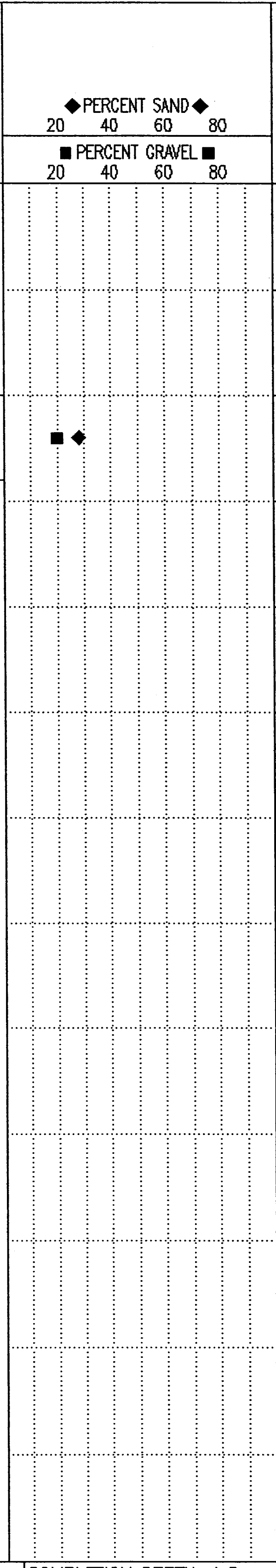
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1351
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1746+664 18.3M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL
0.0	ORGANIC -frozen				
1.0	SANDY SILT WITH GRAVEL (ML) -brown -frozen (Vc) -grinding slightly @ 1.3m	☒	224	ML	▥
2.0	END HOLE @ 1.6m -refusal - hard grinding Note: move 3m upchain - refusal @ 1.6m -moved additional 6m - refusal @ 1.9m - rock dust on bitt Test hole on top of knob.				
3.0					
4.0					
5.0					
6.0					





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	REVIEWED BY:	COMPLETE: 00/05/11
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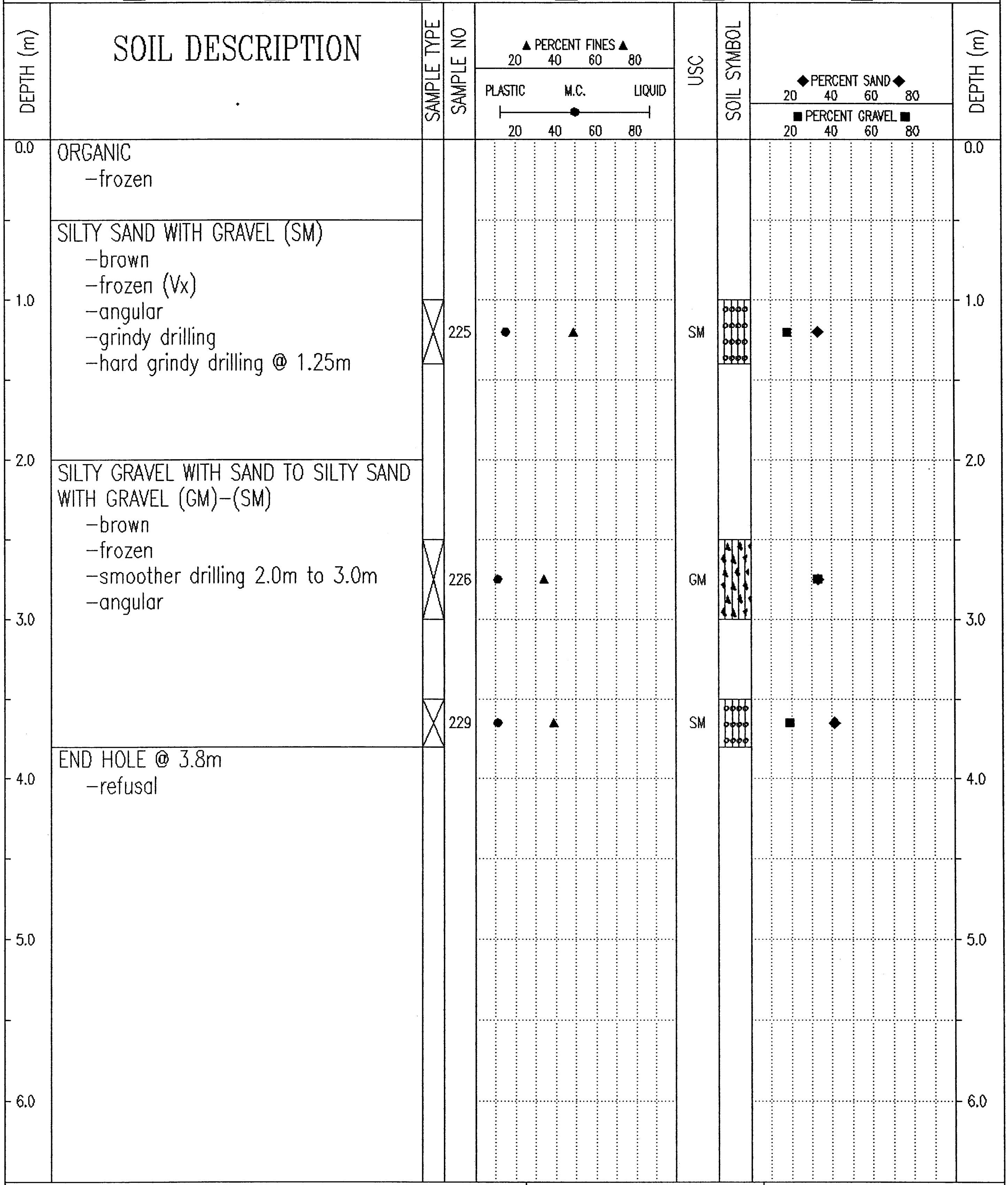
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1352
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1746+735 6.1M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



ORGANIC
- frozen

SILTY SAND WITH GRAVEL (SM)
- brown
- frozen (Vx)
- angular
- grindy drilling
- hard grindy drilling @ 1.25m

SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM)
- brown
- frozen
- smoother drilling 2.0m to 3.0m
- angular

END HOLE @ 3.8m
- refusal

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	REVIEWED BY:	COMPLETE: 00/05/11
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SUBSURFACE EXPLORATION & TESTING REPORT | SHAKWAK SEG 11 | TEST HOLE NO: 543-1353

ENGINEERNG CAPITAL | KM 1729-1787 A/H | Project No: 092-202101-0361

B-40L | LOCATION: 1746+820 21.2M LT | ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)

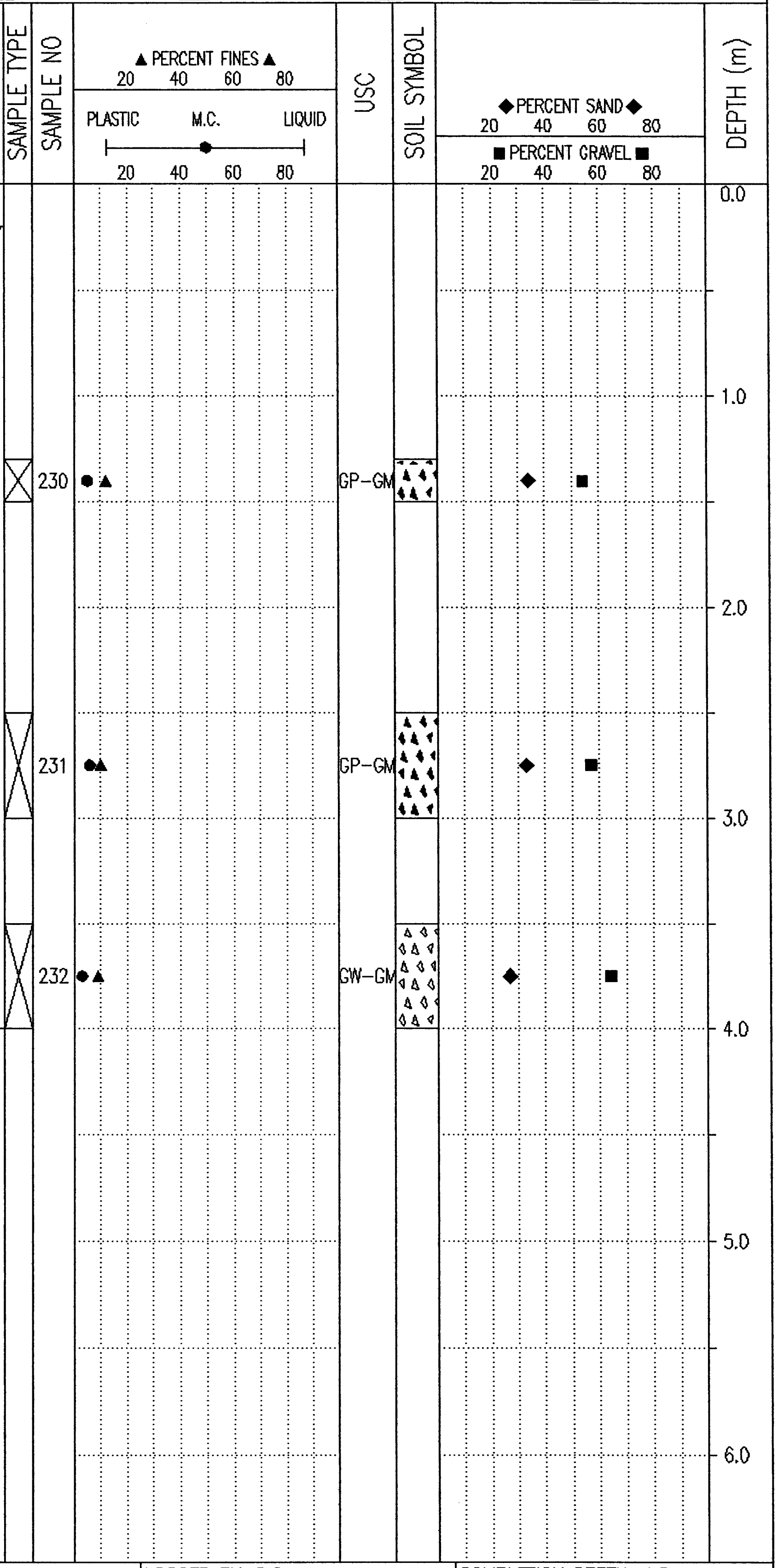
SOIL DESCRIPTION

0.0 ORGANIC
- frozen

POORLY TO WELL-GRADED GRAVEL WITH SILT & SAND (GP-GM)
- brown
- damp
- angular
- organic contamination
- rough drilling @ 1.3m

4.0 END HOLE @ 4.0m
- refusal

Note Large culvert Required - Inlet
TH is 5m upchain of a good size creek



1.0				
2.0				
3.0				
4.0				
5.0				
6.0				

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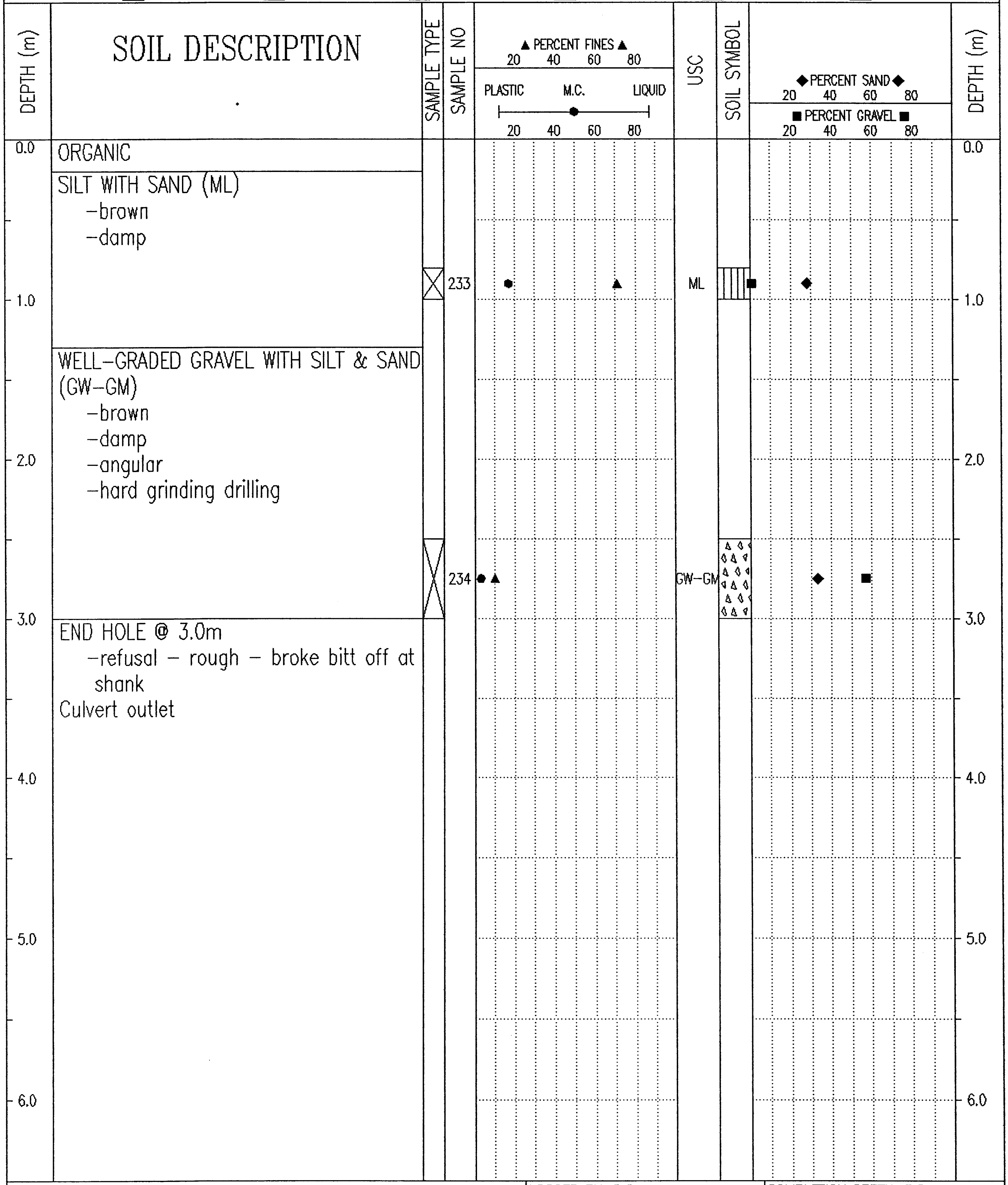
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1354
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1746+825 10.6M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SOIL DESCRIPTION

ORGANIC

SILT WITH SAND (ML)
- brown
- damp

WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)
- brown
- damp
- angular
- hard grinding drilling

END HOLE @ 3.0m
- refusal - rough - broke bitt off at shank

Culvert outlet

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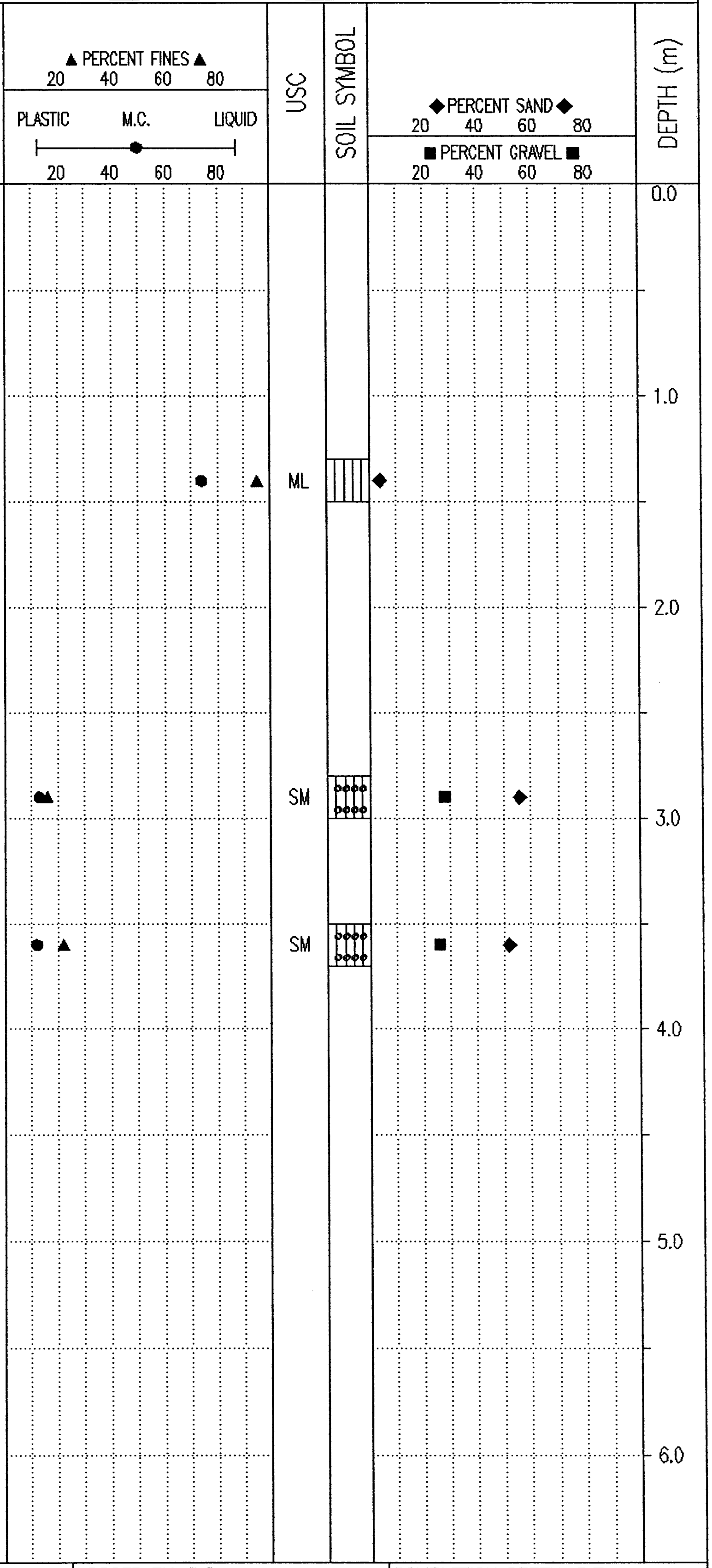
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1355
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1746+917 2.6M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC -frozen -slow penetration			
1.0	SILT (ML) -brown -frozen (Vx)	☒	235	ML
2.5	SILTY SAND WITH GRAVEL (SM) -brown -frozen -grinding -rough drilling below 3.0m	☒ ☒	236 237	SM SM
3.7	END HOLE @ 3.7m -refusal			



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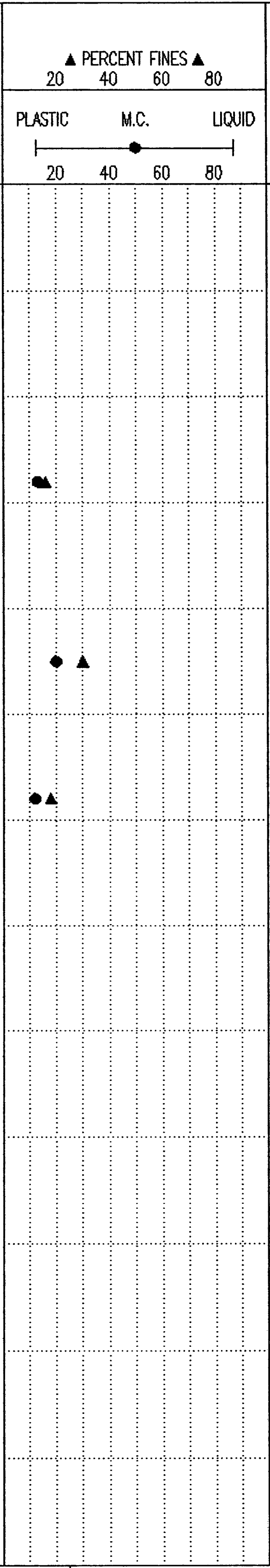
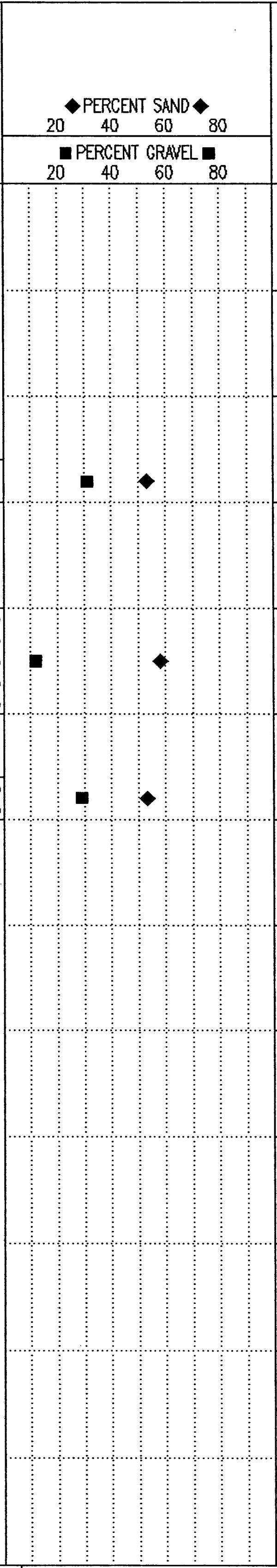
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1356
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1746+999 4.8M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL
0.0	ORGANICS & ASH -frozen				
0.75	SILTY SAND WITH GRAVEL (SM) -brown -frozen -angular -grinding starts @ 0.75m -very rough drilling @ 1.8m	☒	238	SM	▥
2.0	SILTY SAND (SM) -brown -frozen -easier drilling - smoother	☒	239	SM	▥
	SILTY SAND WITH GRAVEL (SM) -brown -frozen	☒	240	SM	▥
3.3	END HOLE @ 3.3m -refusal				





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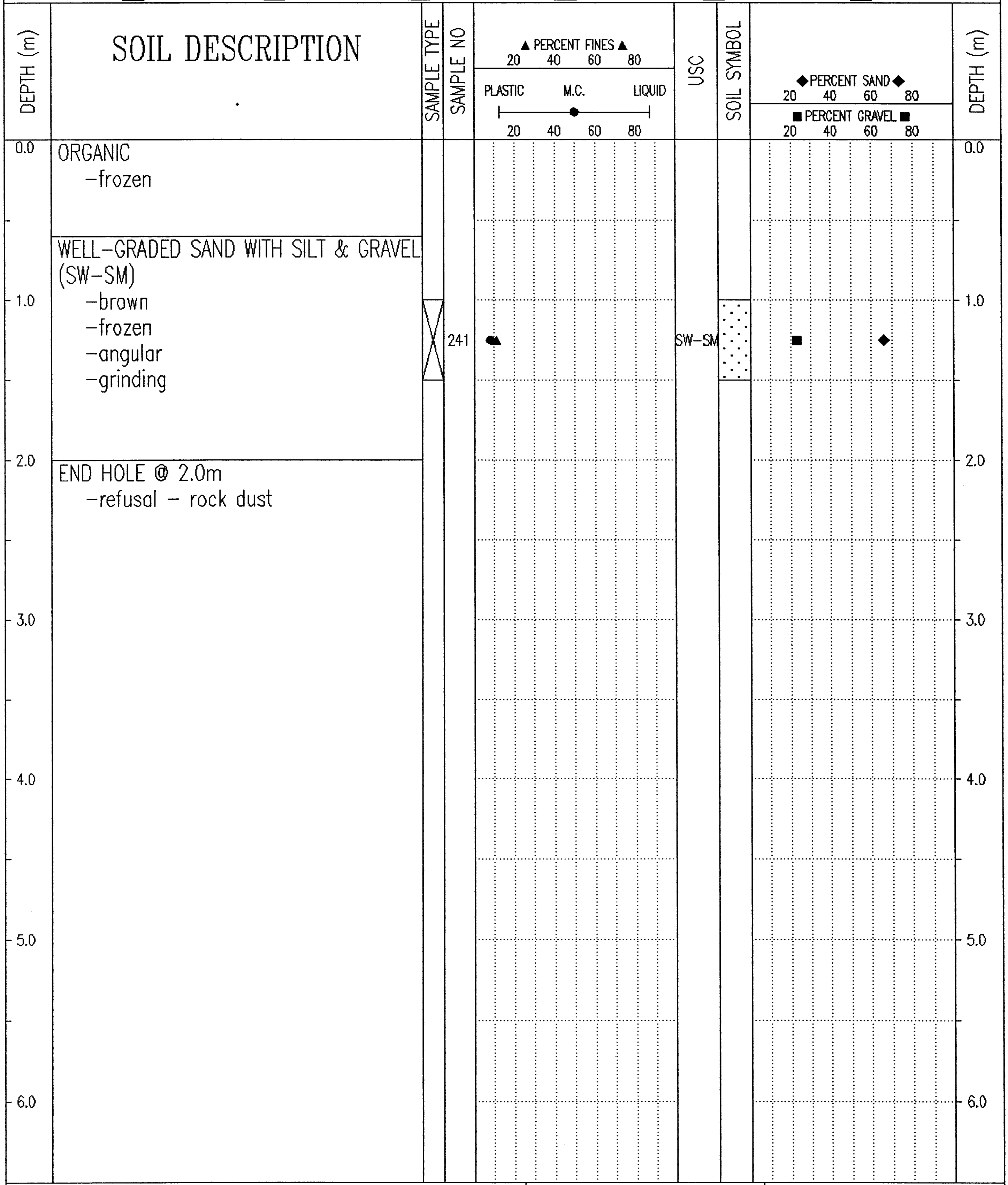
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1357
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1747+112 8.1M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



ORGANIC
-frozen

WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)
-brown
-frozen
-angular
-grinding

END HOLE @ 2.0m
-refusal - rock dust

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	Fig. No:
COMPLETION DEPTH: 2.0 m	
COMPLETE: 00/05/11	
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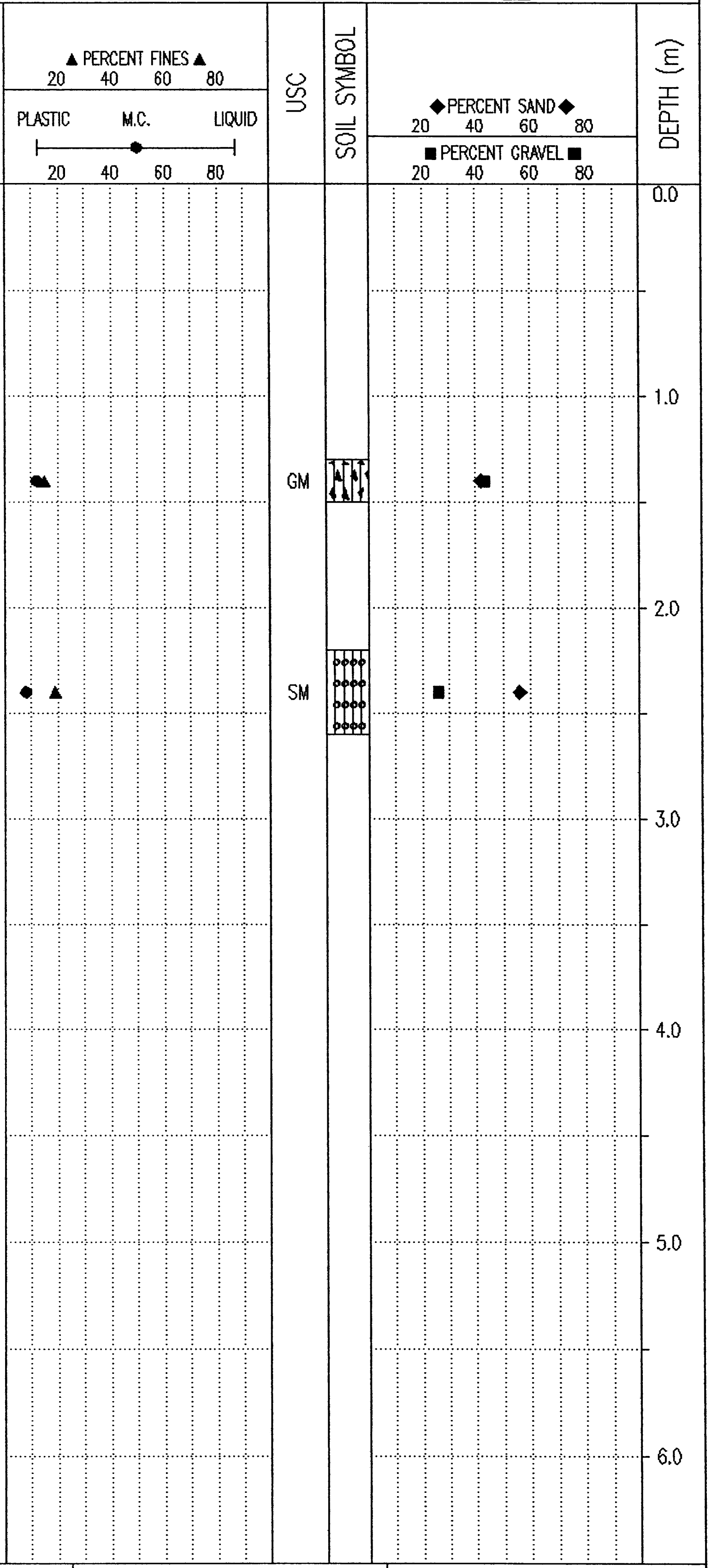
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543–1358
ENGINEERNG CAPITAL	KM 1729–1787 A/H	Project No: 092–202101–0361
B–40L	LOCATION: 1747+207 25.8M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC			
	SILTY GRAVEL WITH SAND (GM) –brown –frozen	☒	242	GM
1.0				
	SILTY SAND WITH GRAVEL (SM) –brown –frozen –grinding starts @ 1.4m –slow drilling below 1.8m	☒	243	SM
2.0				
	END HOLE @ 2.6m –refusal			
3.0	Culvert installation – Inlet			
4.0				
5.0				
6.0				



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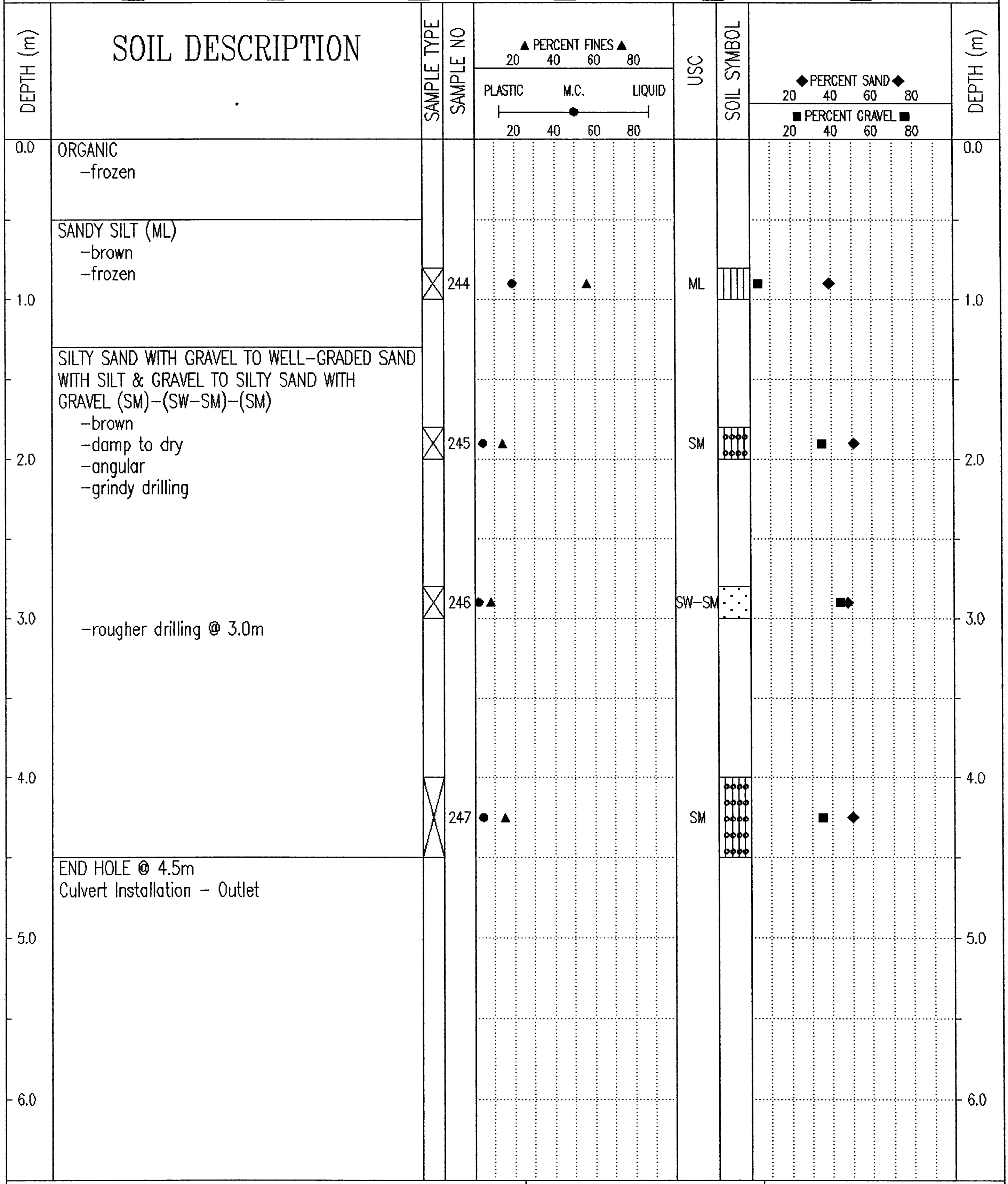
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1359
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1747+215 18.6M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



ORGANIC
-frozen

SANDY SILT (ML)
-brown
-frozen

SILTY SAND WITH GRAVEL TO WELL-GRADED SAND WITH SILT & GRAVEL TO SILTY SAND WITH GRAVEL (SM)-(SW-SM)-(SM)
-brown
-damp to dry
-angular
-grindy drilling

-rougher drilling @ 3.0m

END HOLE @ 4.5m
Culvert Installation – Outlet

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 00/05/11
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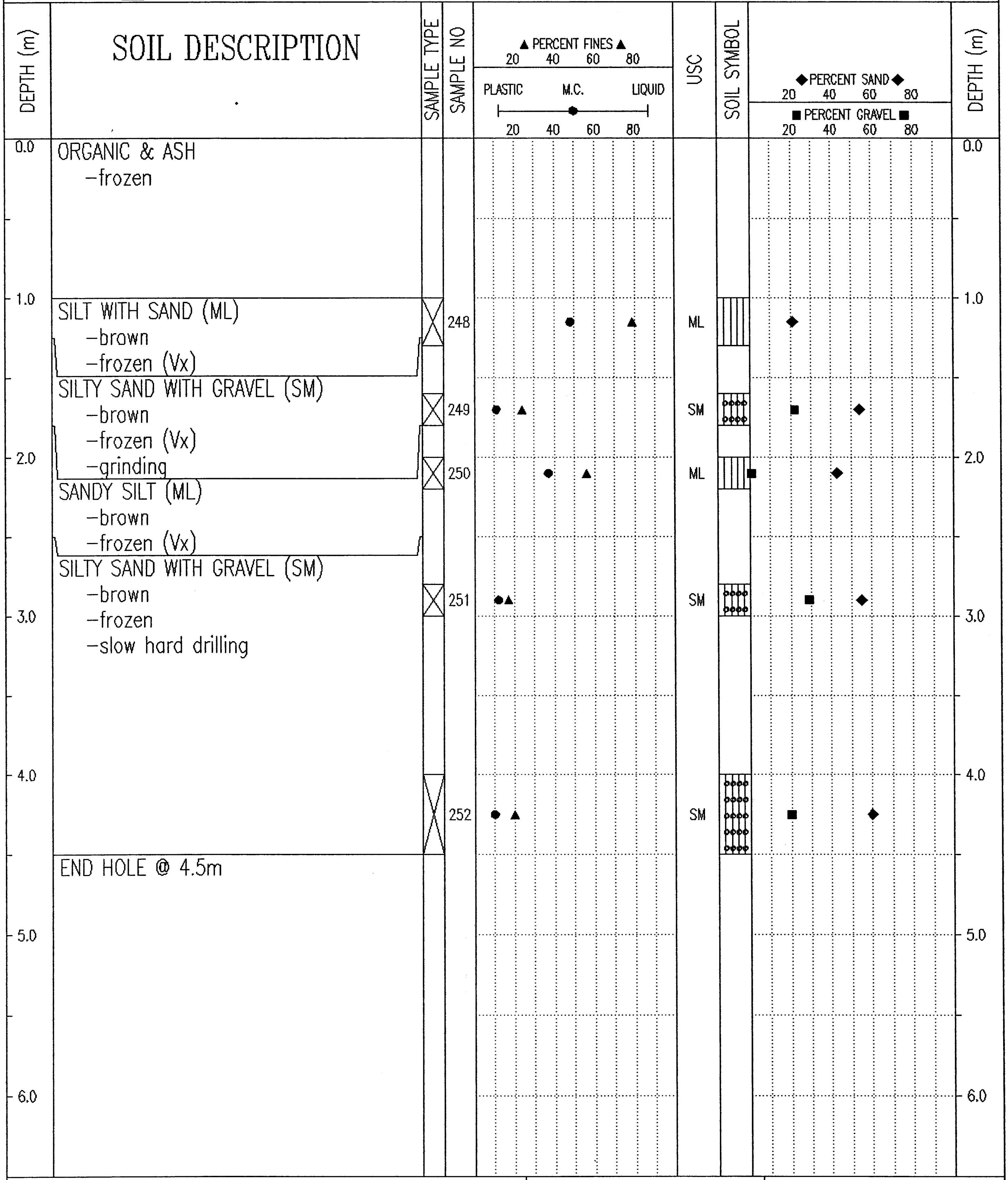
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1360
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1747+277 4.1M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



ORGANIC & ASH
-frozen

SILT WITH SAND (ML)
-brown
-frozen (Vx)

SILTY SAND WITH GRAVEL (SM)
-brown
-frozen (Vx)
-grinding

SANDY SILT (ML)
-brown
-frozen (Vx)

SILTY SAND WITH GRAVEL (SM)
-brown
-frozen
-slow hard drilling

END HOLE @ 4.5m

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 00/05/12
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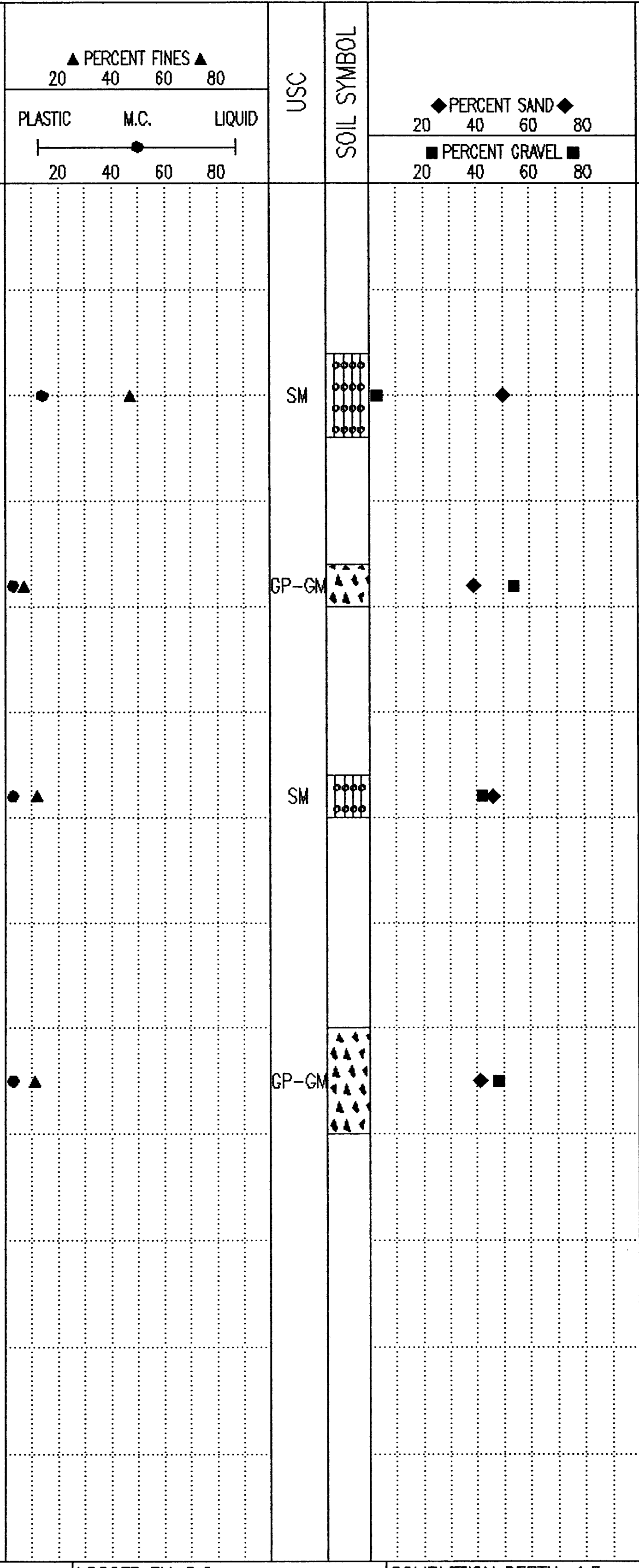
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1362
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1747+348 17M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ◧ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC & ASH			
	SILTY SAND (SM) -frozen			
1.0		☒	256	SM
	POORLY GRADED GRAVEL WITH SILT & SAND TO SILTY SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)-(SM)-(GP-GM) -brown -damp -silt contamination from above -sub-angular -drill grinding -tough drilling @ 2.2m			
2.0		☒	257	GP-GM
3.0		☒	258	SM
4.0		☒	259	GP-GM
	END HOLE @ 4.5m -refusal Culvert Installation - Outlet			
5.0				
6.0				



Government of Yukon Transportation Engineering	LOGGED BY: G.C.
	REVIEWED BY:
	Fig. No:
	COMPLETION DEPTH: 4.5 m
	COMPLETE: 00/05/12
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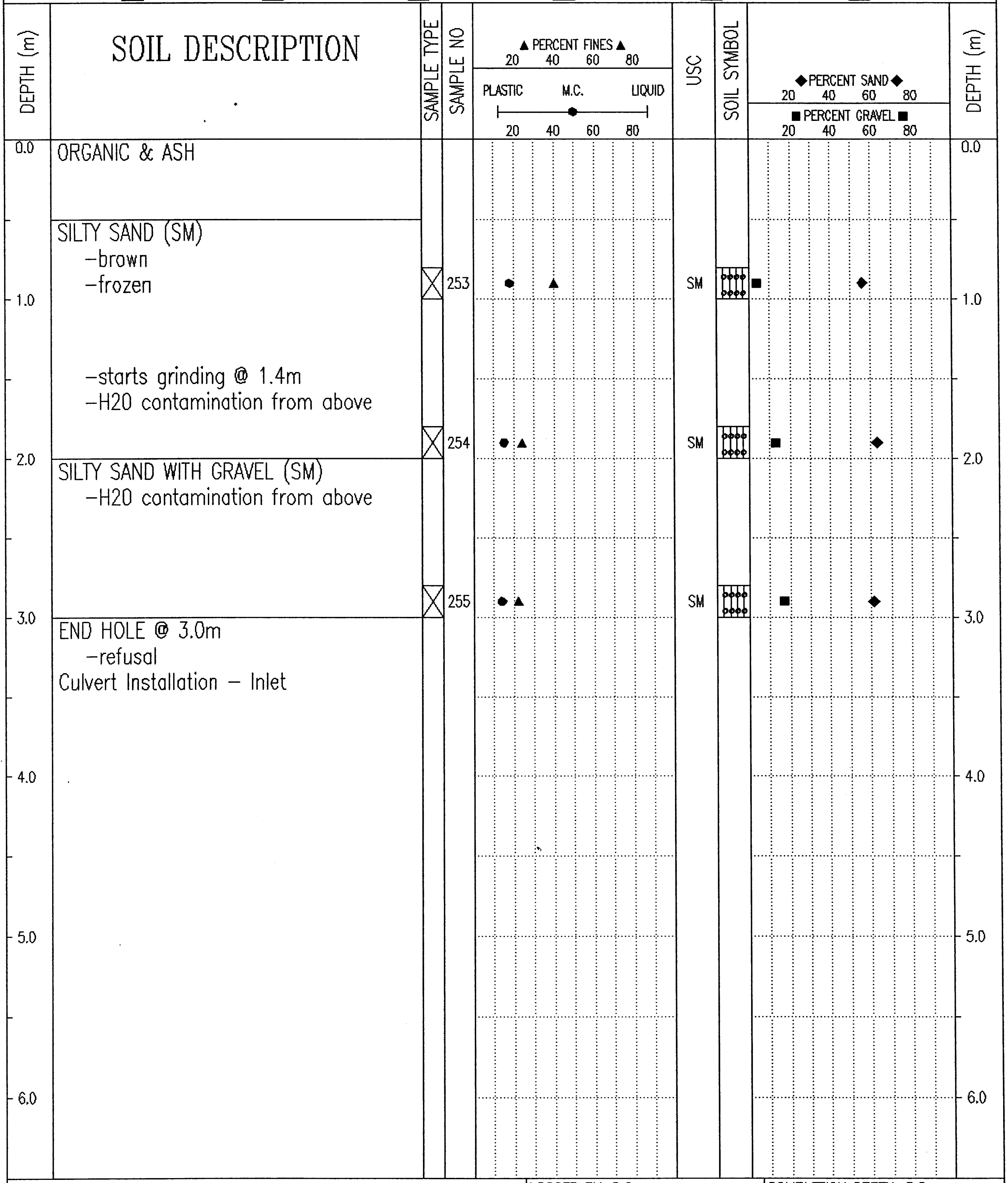
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1361
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1747+353 23M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



Depth (m)	Soil Description	Sample No	USC
0.0	ORGANIC & ASH		
	SILTY SAND (SM) -brown -frozen	253	SM
	-starts grinding @ 1.4m -H20 contamination from above	254	SM
2.0	SILTY SAND WITH GRAVEL (SM) -H20 contamination from above	255	SM
3.0	END HOLE @ 3.0m -refusal Culvert Installation - Inlet		

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	REVIEWED BY:	COMPLETE: 00/05/12
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1363
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1747+453 0.4M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

SOIL DESCRIPTION

DEPTH (m)

0.0 ORGANIC

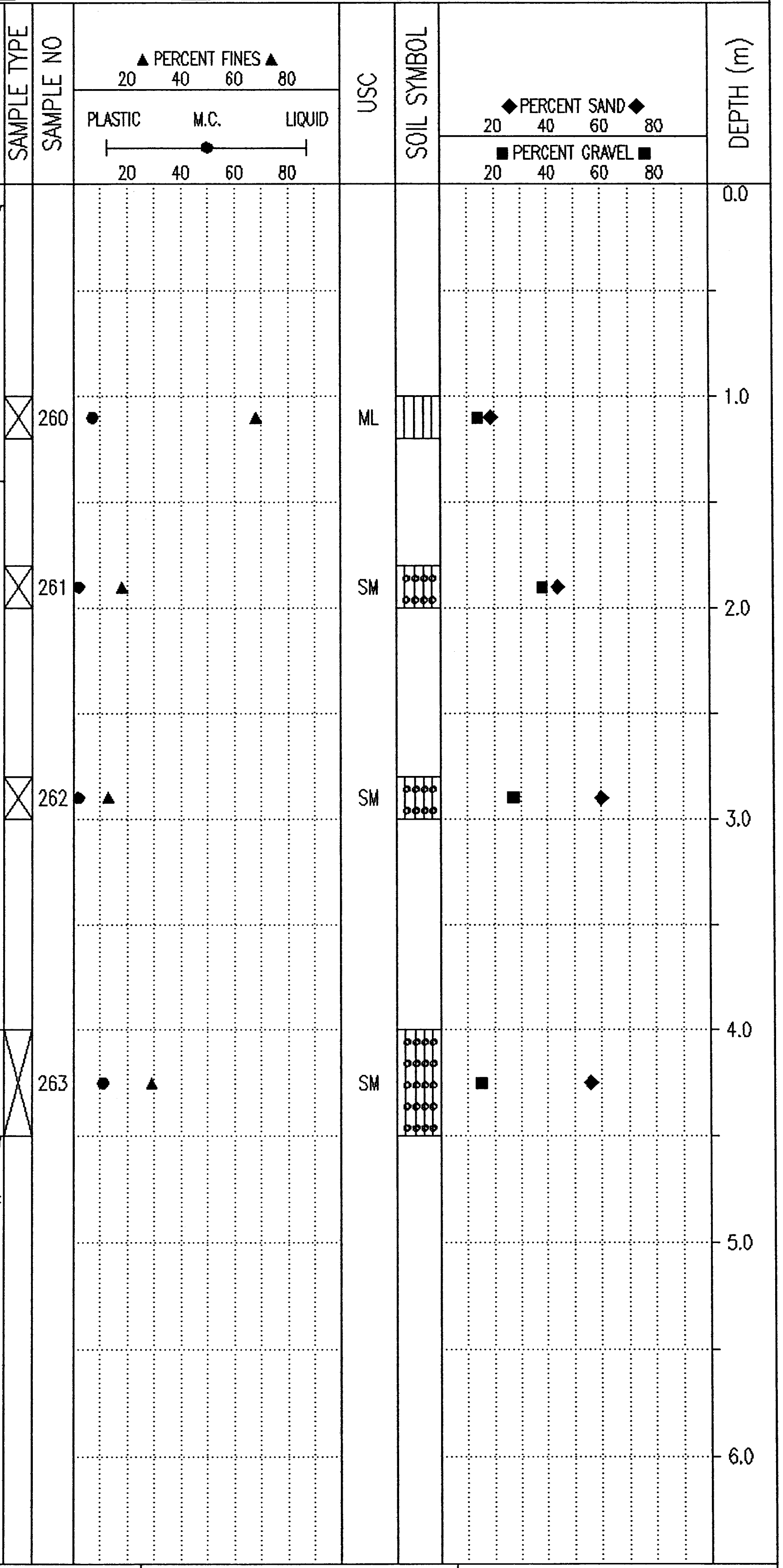
SANDY SILT (ML)
- brown
- damp

SILTY SAND WITH GRAVEL (SM)
- brown
- damp
- drill grinding

- easy drilling

4.0 SILTY SAND (SM)
- brown
- frozen
- slow hard drilling

END HOLE @ 4.5m
Note: 2.5m ledge drop off 5m downchain of this hole.



Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 00/05/12
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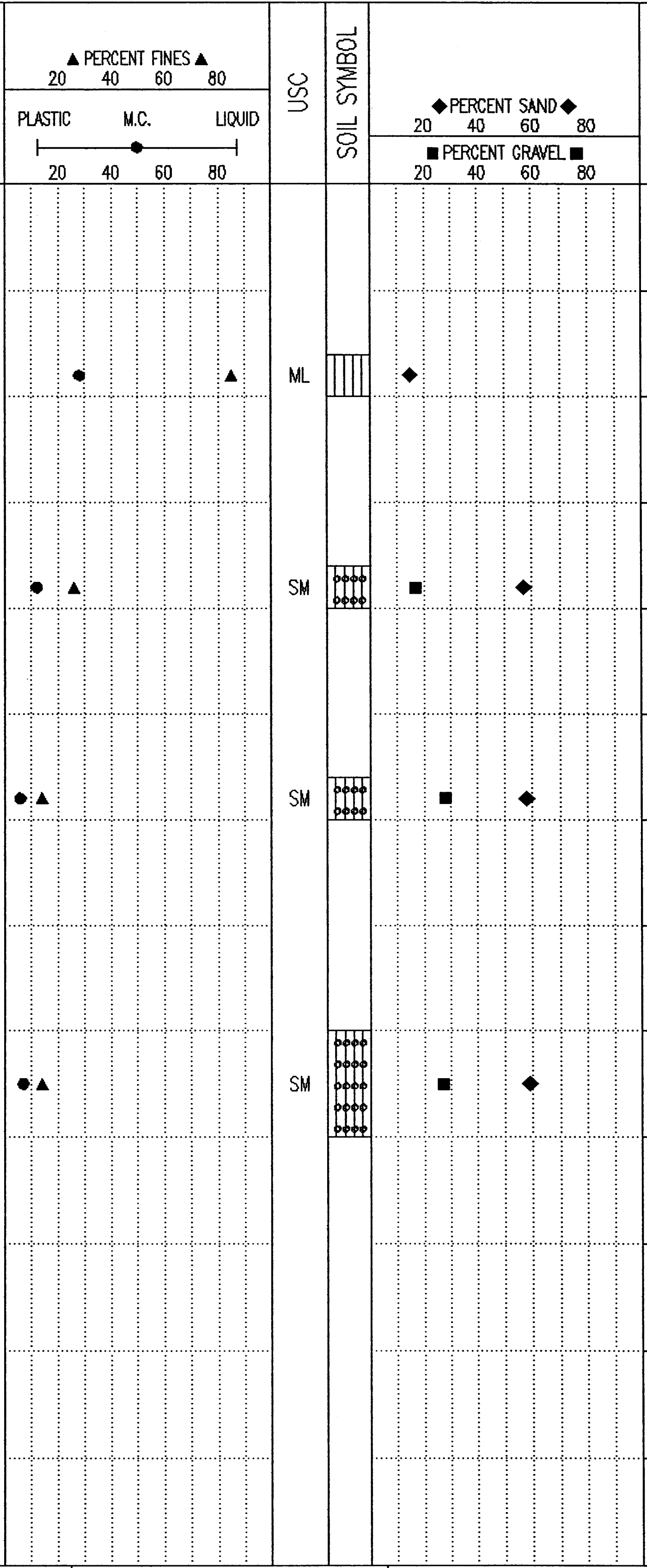
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543–1364
ENGINEERNG CAPITAL	KM 1729–1787 A/H	Project No: 092–202101–0361
B–40L	LOCATION: 1747+504 3.7M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC –with ash –frozen			
0.5	SILT WITH SAND (ML) –brown –frozen	☒	264	ML
1.4	SILTY SAND WITH GRAVEL (SM) –brown –frozen –hard slow grinding drilling	☒	265	SM
		☒	266	SM
		☒	267	SM
4.5	END HOLE @ 4.5m			



DEPTH (m): 0.0, 1.0, 2.0, 3.0, 4.0, 5.0, 6.0

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	REVIEWED BY:	COMPLETE: 00/05/12
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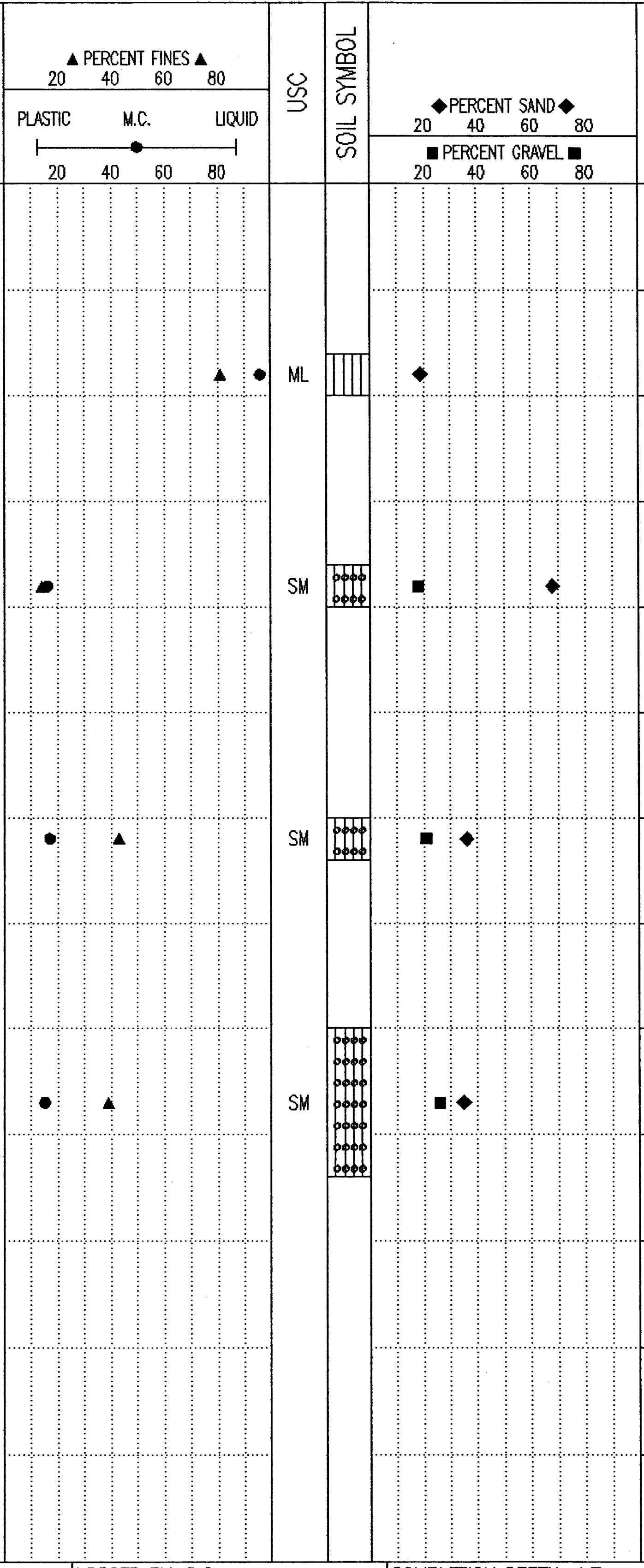
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1366
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
W-40L	LOCATION: 1747+564 16.5M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◸ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC -frozen			
	SILT WITH SAND (ML) -frozen (Vx)			
		☒	269	ML
1.0				
	SILTY SAND WITH GRAVEL (SM) -brown -frozen -grinding drilling	☒	270	SM
2.0				
	-olive brown below 2.7m			
3.0		☒	271	SM
4.0	-tight drilling @ 4.0m			
		☒	272	SM
	END HOLE @ 4.7m Culvert Installation – Outlet			
5.0				
6.0				



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LOGGED BY: G.C.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/05/12
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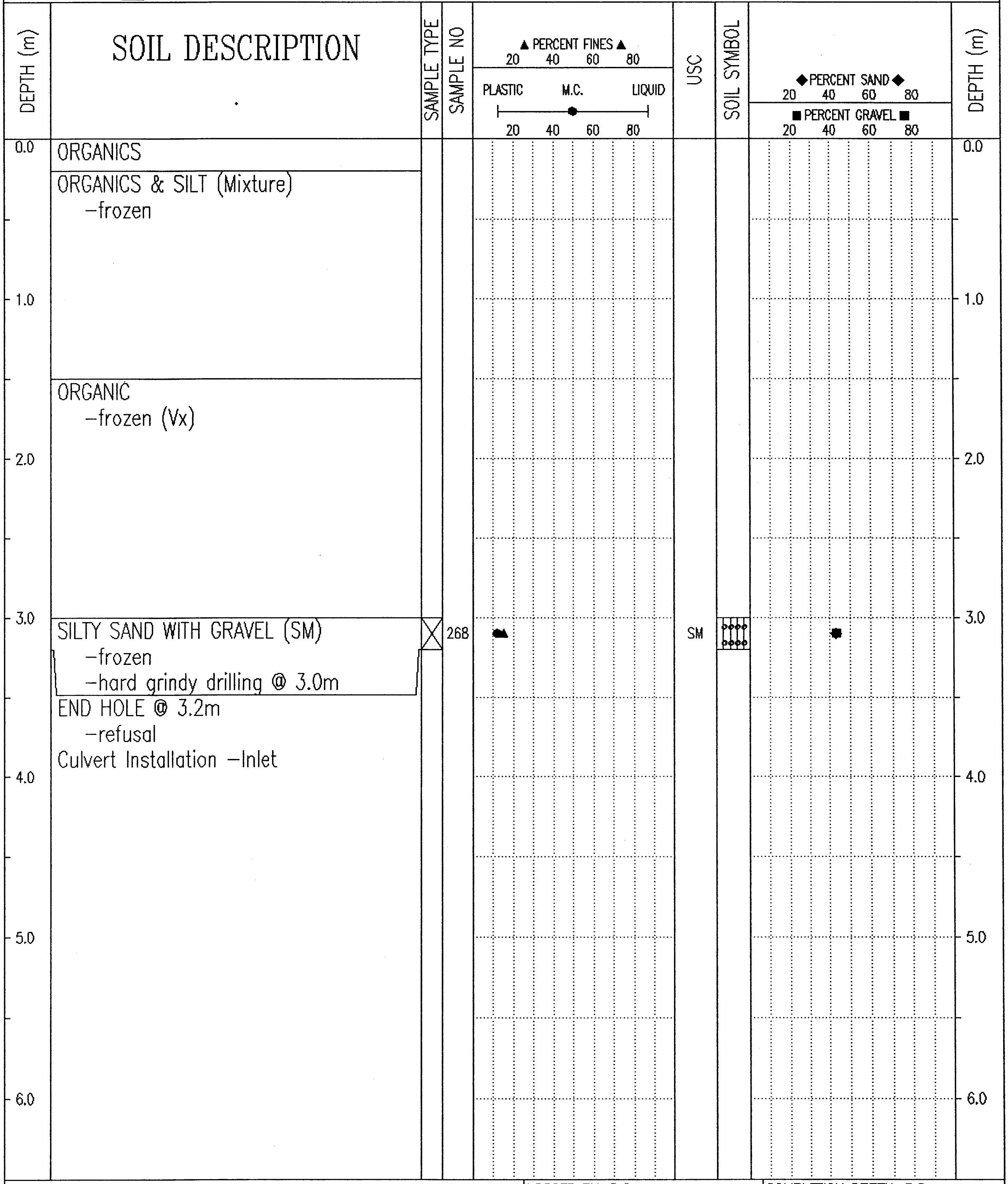
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1365
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1747+573 18.9M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◸ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ▌ CORE



ORGANICS

ORGANICS & SILT (Mixture)
-frozen

ORGANIC
-frozen (Vx)

SILTY SAND WITH GRAVEL (SM)
-frozen
-hard grindy drilling @ 3.0m

END HOLE @ 3.2m
-refusal
Culvert Installation -Inlet

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REVIEWED BY:	COMPLETE: 00/05/12
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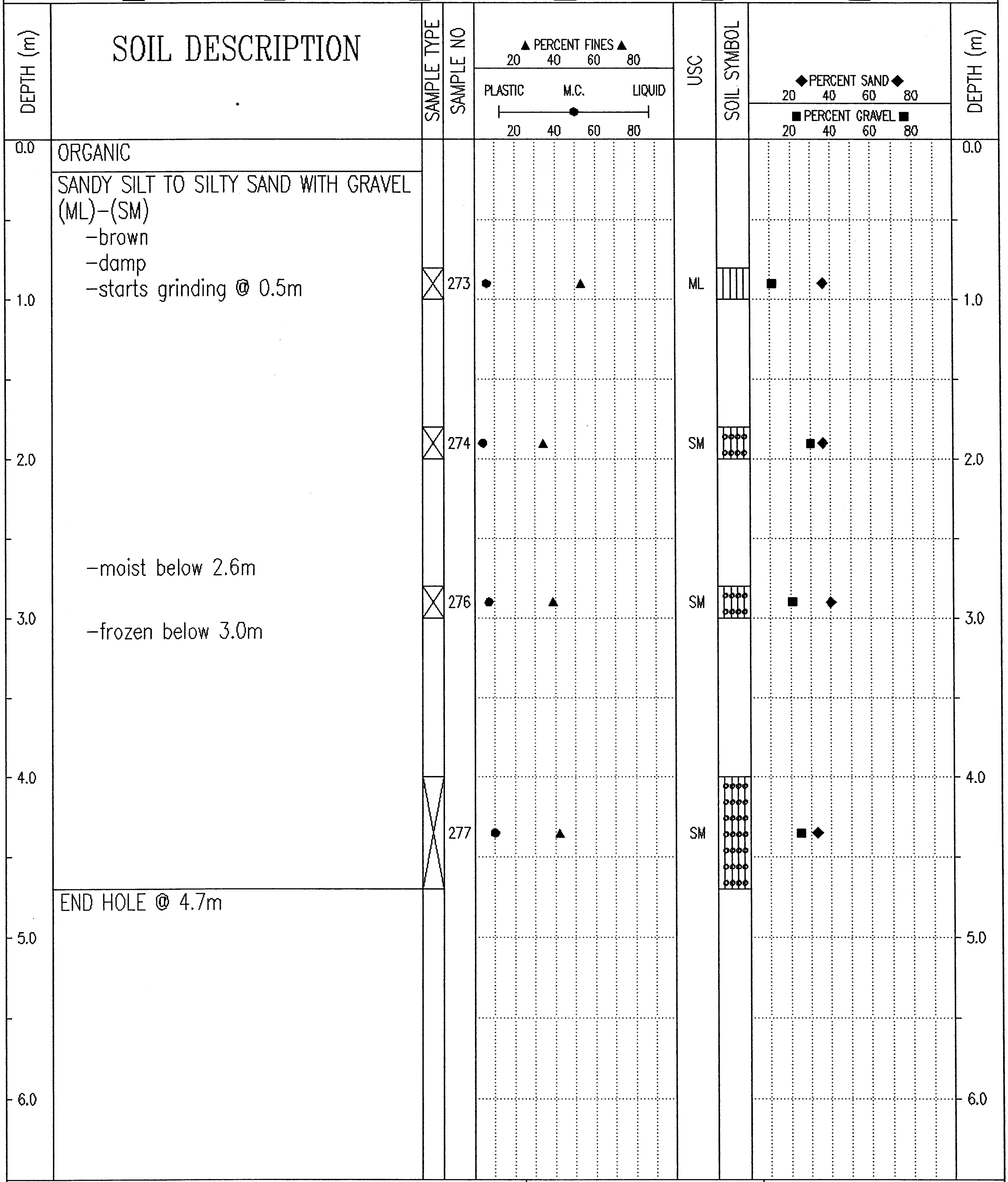
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1367
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1747+621 3.9M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◸ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▌ CORE



ORGANIC

SANDY SILT TO SILTY SAND WITH GRAVEL (ML)-(SM)
- -brown
- -damp
- -starts grinding @ 0.5m
- -moist below 2.6m
- -frozen below 3.0m

END HOLE @ 4.7m

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	REVIEWED BY:	COMPLETE: 00/05/12
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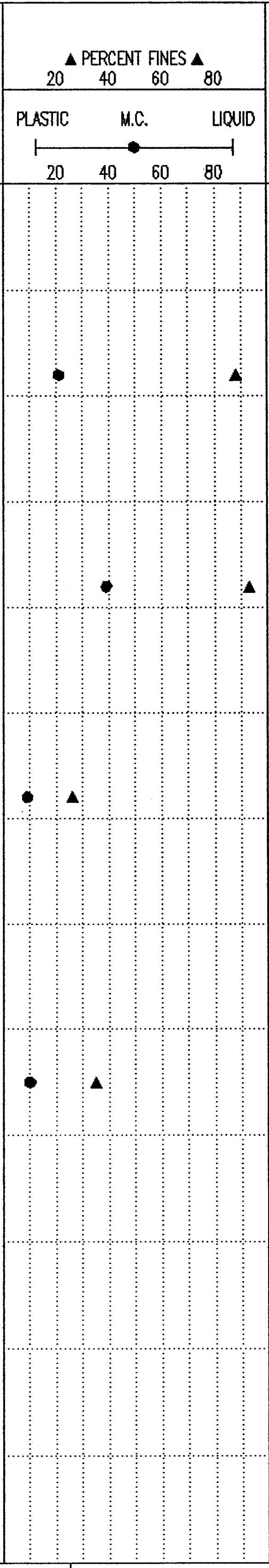
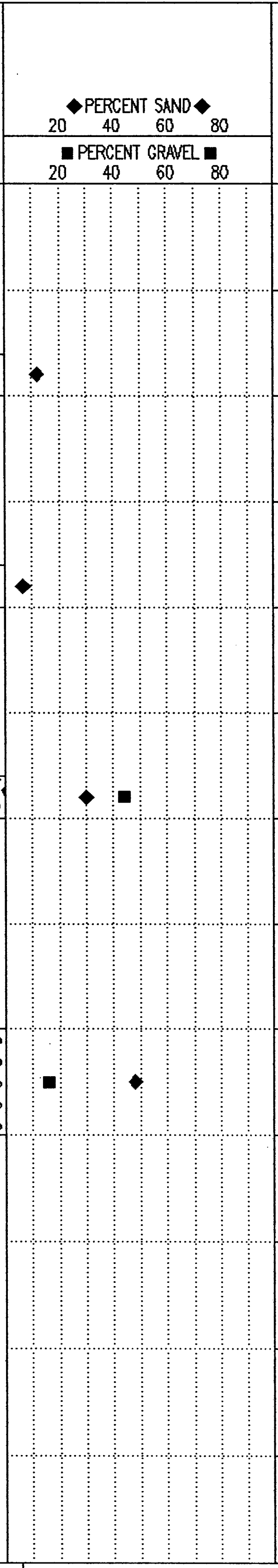
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543-1368
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1747+724 2.9 LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC			
	SILT (ML) -brown -frozen (Vx)			
1.0		☒	278	ML
	-tight smooth drilling			
2.0		☒	279	ML
	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -brown -frozen -grinding drilling			
3.0		☒	280	GM
4.0		☒	281	SM
	END HOLE @ 4.5m -refusal			
5.0				
6.0				





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	REVIEWED BY:	COMPLETE: 00/05/12
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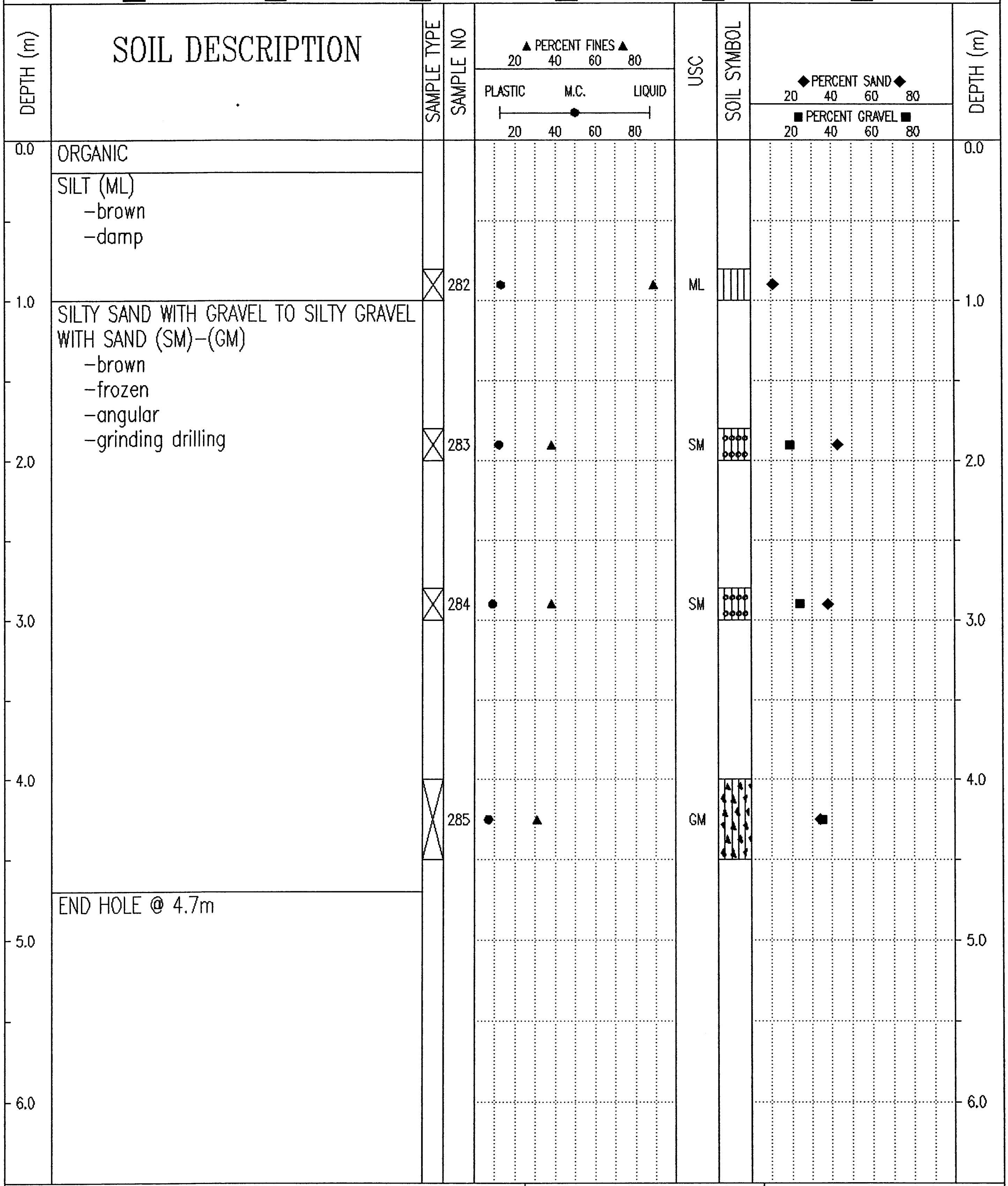
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 543–1369
ENGINEERNG CAPITAL	KM 1729–1787 A/H	Project No: 092–202101–0361
B–40L	LOCATION: 1747+845 5.1M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



DEPTH (m)	SOIL DESCRIPTION	SAMPLE NO	USC
0.0	ORGANIC		
	SILT (ML) –brown –damp	282	ML
1.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)–(GM) –brown –frozen –angular –grinding drilling	283	SM
		284	SM
		285	GM
	END HOLE @ 4.7m		

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LOGGED BY: G.C.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/05/12
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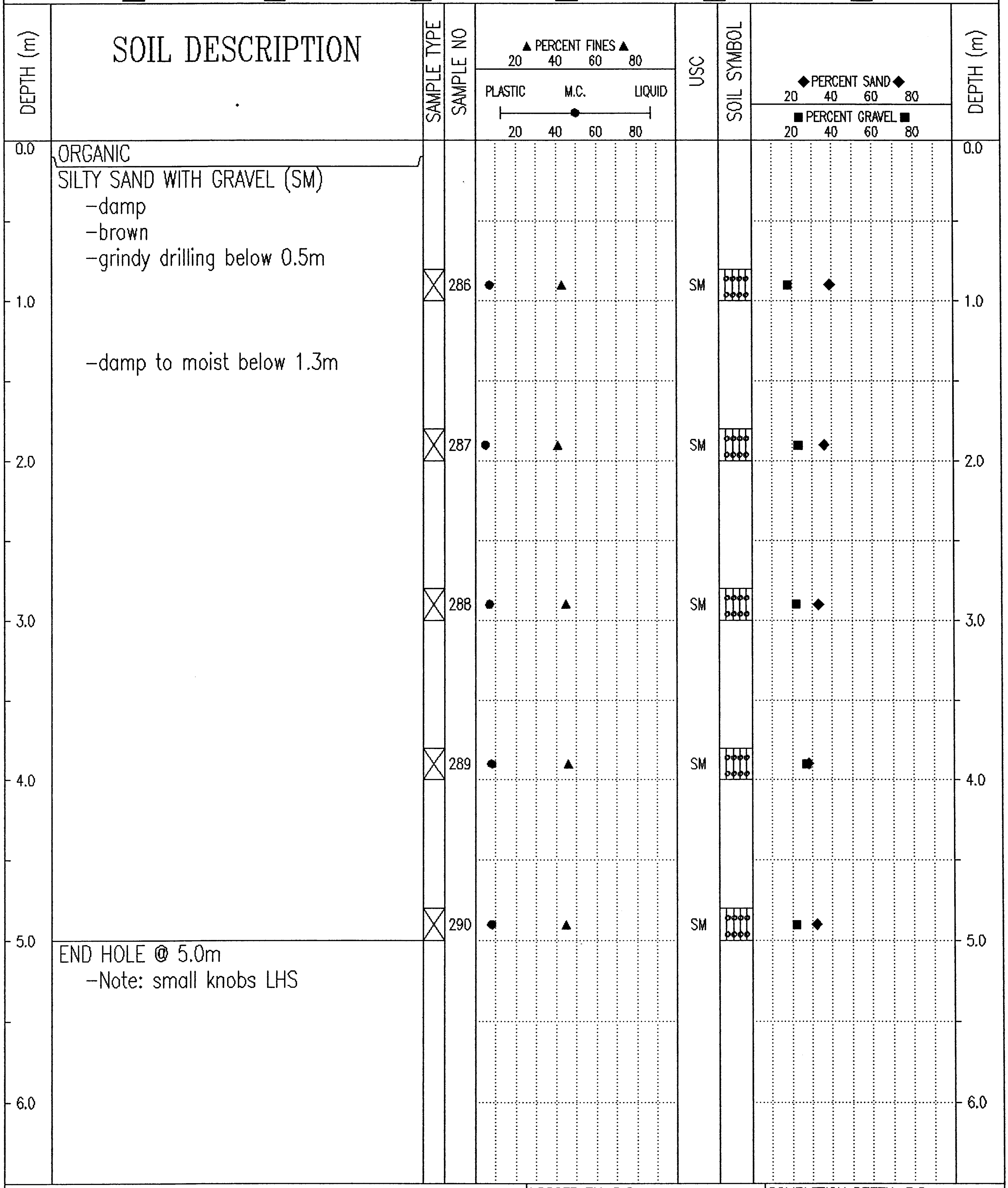
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1370
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1747+926 24.2M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



ORGANIC

SILTY SAND WITH GRAVEL (SM)
- damp
- brown
- grindy drilling below 0.5m
- damp to moist below 1.3m

END HOLE @ 5.0m
- Note: small knobs LHS

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 00/05/15
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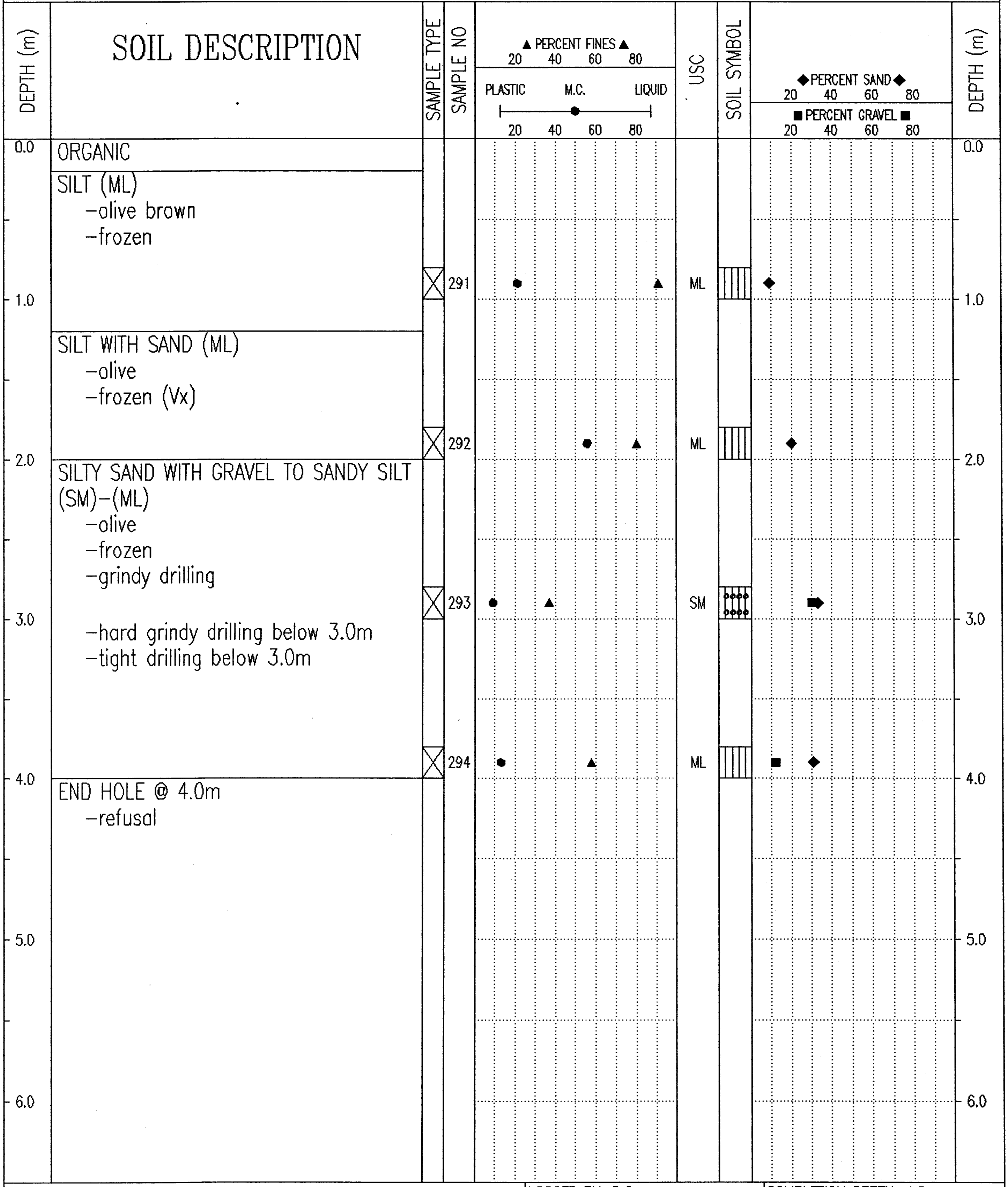
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1371
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1748+001 3.0M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



0.0 ORGANIC

SILT (ML)
- olive brown
- frozen

SILT WITH SAND (ML)
- olive
- frozen (Vx)

SILTY SAND WITH GRAVEL TO SANDY SILT (SM)-(ML)
- olive
- frozen
- grindy drilling

- hard grindy drilling below 3.0m
- tight drilling below 3.0m

END HOLE @ 4.0m
- refusal

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	REVIEWED BY:	COMPLETE: 00/05/15
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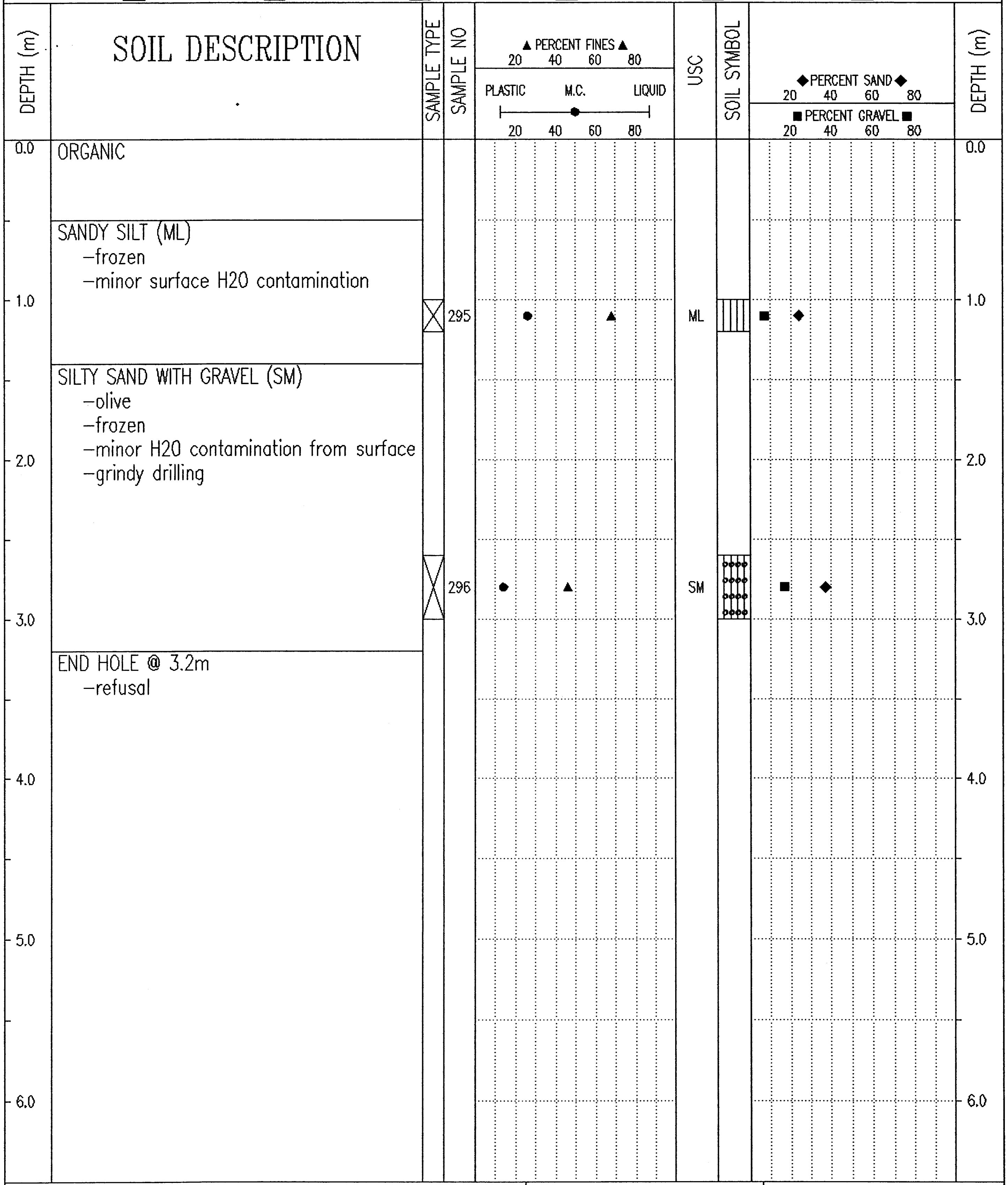
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1372
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1748+119 20M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



ORGANIC

SANDY SILT (ML)
- frozen
- minor surface H20 contamination

SILTY SAND WITH GRAVEL (SM)
- olive
- frozen
- minor H20 contamination from surface
- grindy drilling

END HOLE @ 3.2m
- refusal

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 3.2 m
	REVIEWED BY:	COMPLETE: 00/05/15
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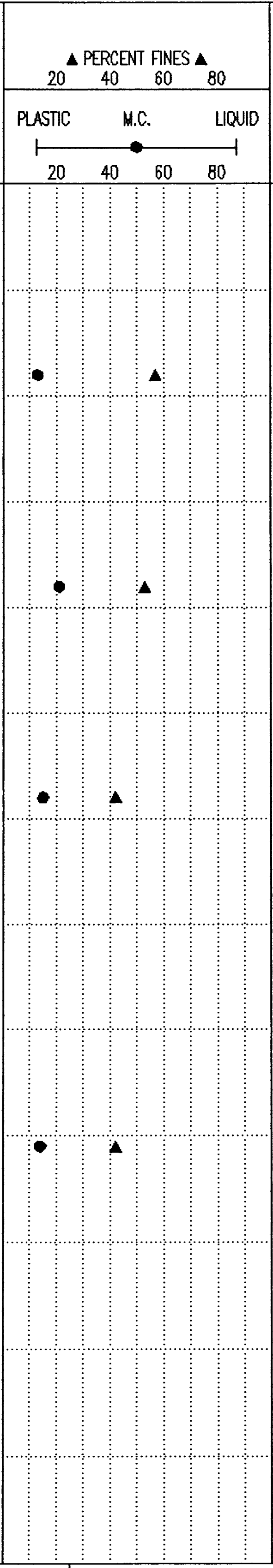
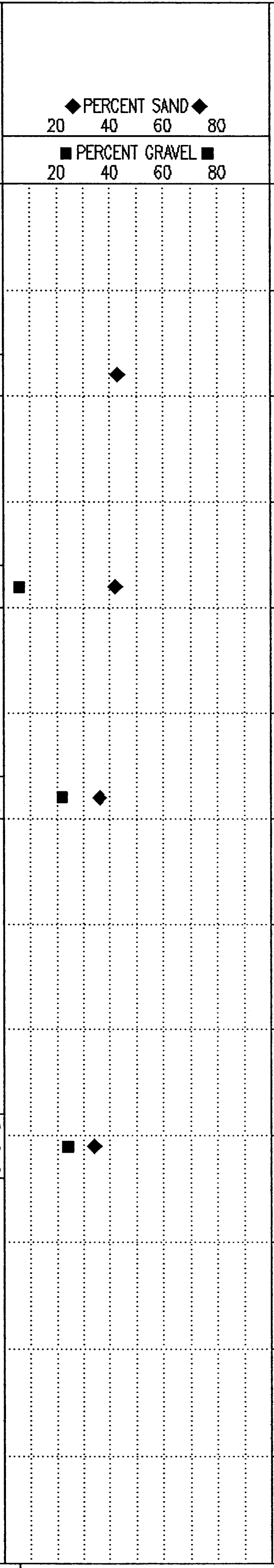
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1373
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1748+129 19M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

SOIL DESCRIPTION

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC & ASH			
	SANDY SILT (ML) -brown -frozen	☒	297	ML
1.0	ICE			
	SANDY SILT TO SILTY SAND WITH GRAVEL (ML)-(SM) -brown -frozen -grindy drilling below 1.8m	☒	298	ML
2.0				
3.0		☒	299	SM
4.0		☒	300	SM
	END HOLE @ 4.7m Note: culvert installation outlet			
5.0				
6.0				





Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/15
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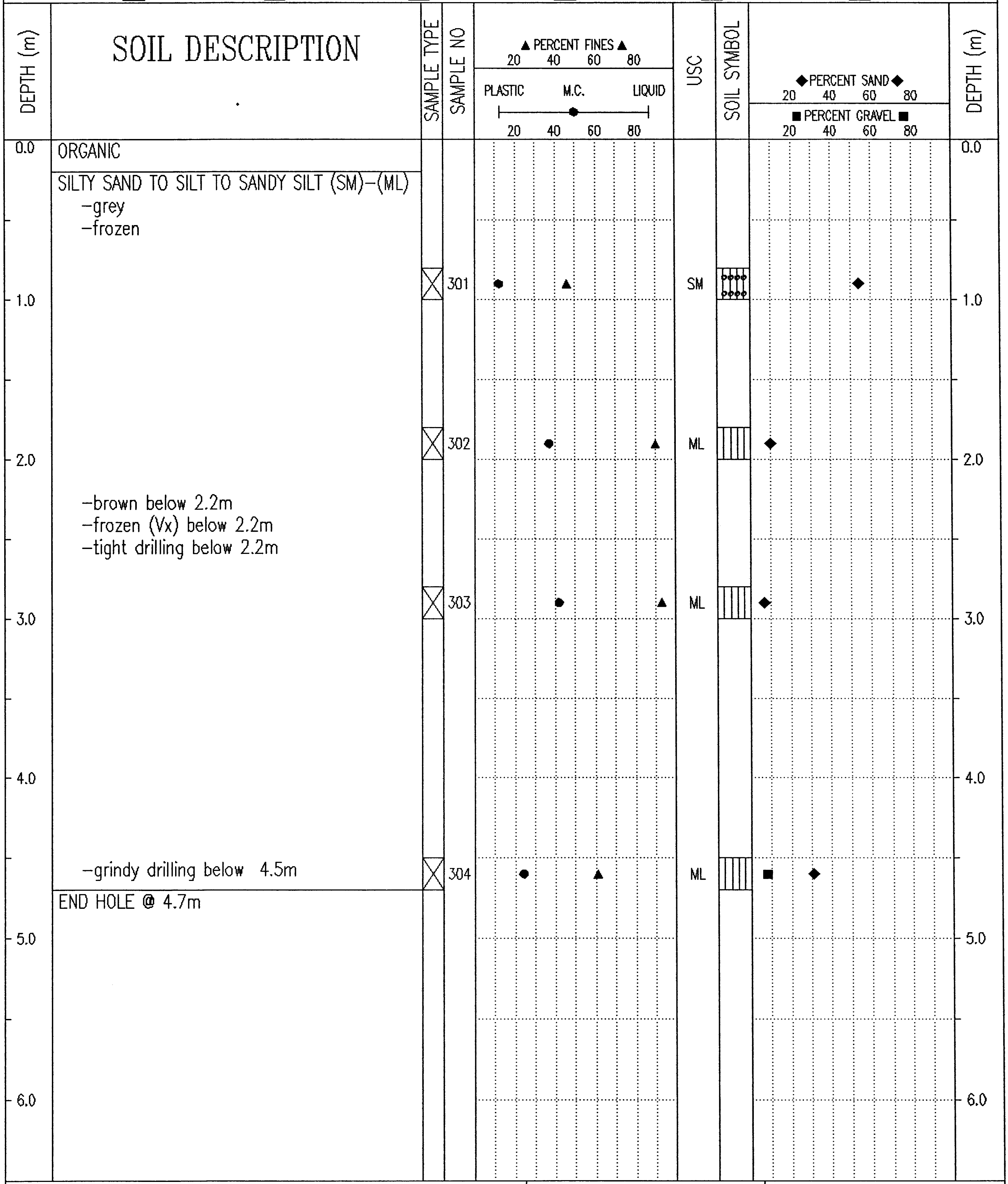
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1374
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1748+232 6.5M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



ORGANIC

SILTY SAND TO SILT TO SANDY SILT (SM)-(ML)
- -grey
- -frozen
- -brown below 2.2m
- -frozen (Vx) below 2.2m
- -tight drilling below 2.2m
- -grindy drilling below 4.5m

END HOLE @ 4.7m

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/15
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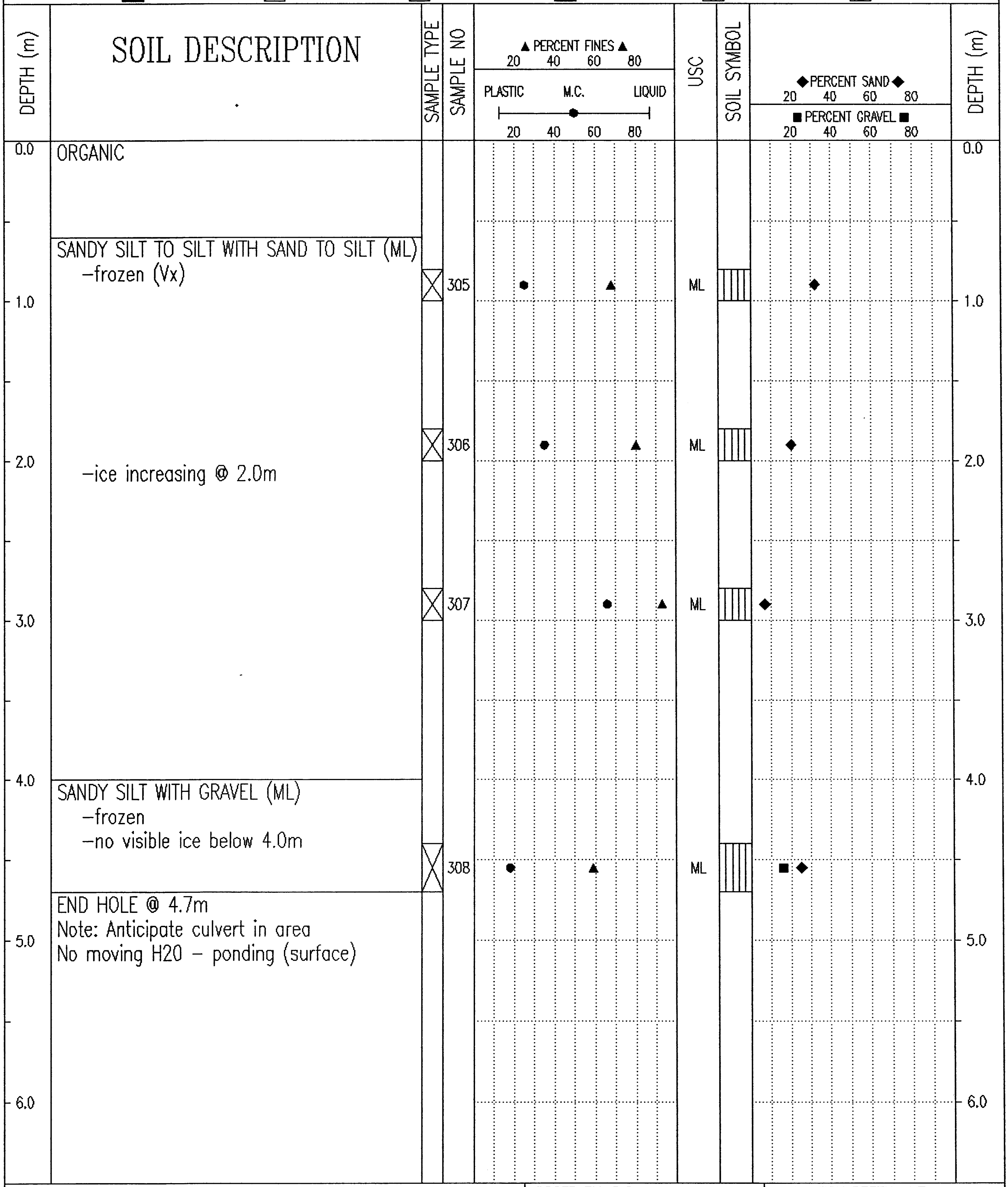
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1375
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1748+315 18.2LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



0.0 ORGANIC

SANDY SILT TO SILT WITH SAND TO SILT (ML)
-frozen (Vx)

-ice increasing @ 2.0m

4.0 SANDY SILT WITH GRAVEL (ML)
-frozen
-no visible ice below 4.0m

END HOLE @ 4.7m
Note: Anticipate culvert in area
No moving H20 - ponding (surface)

Government of Yukon	LOGGED BY: G.C.	COMPLETION DEPTH: 4.7 m
Transportation Engineering	REVIEWED BY:	COMPLETE: 00/05/15
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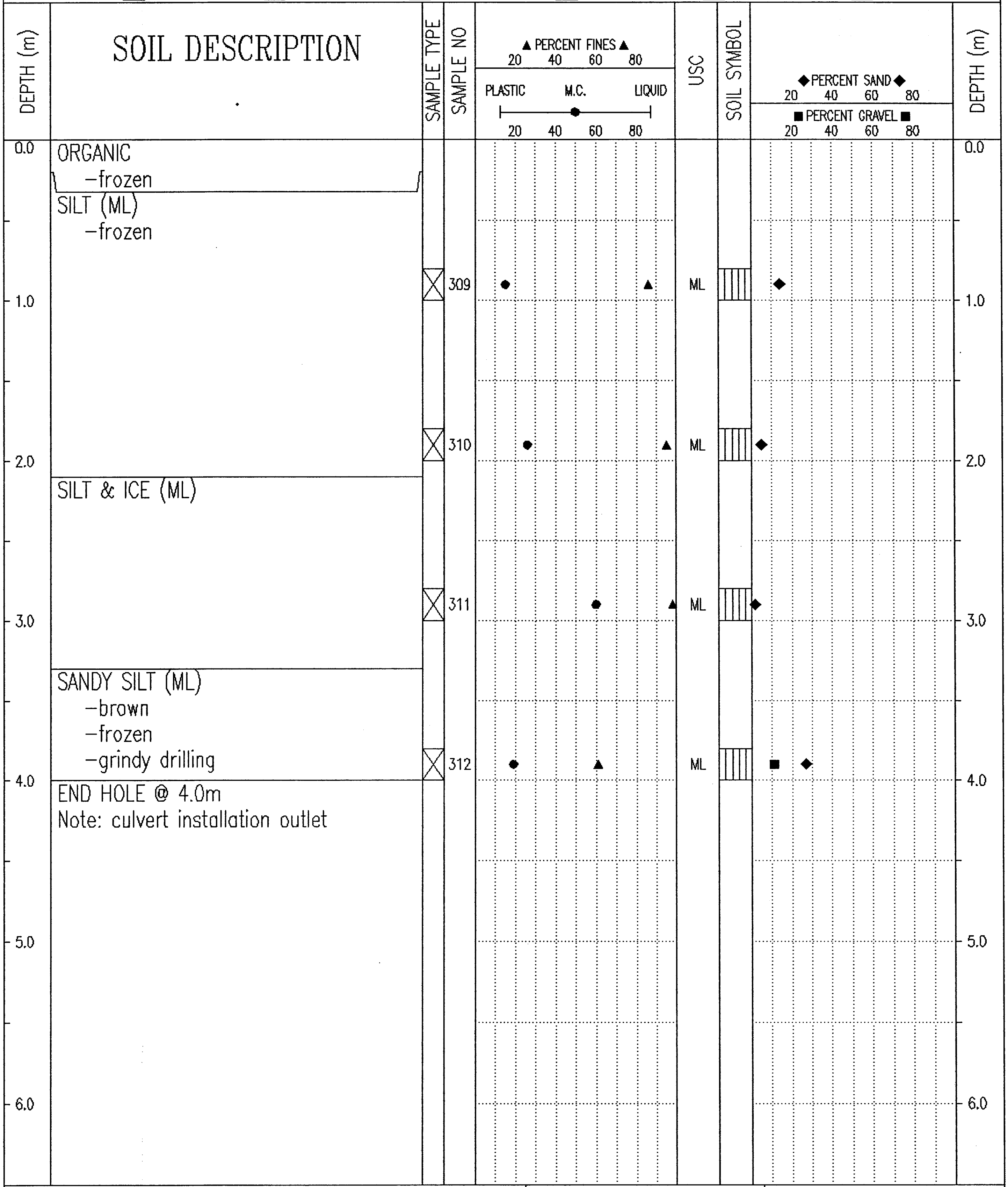
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1376
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1748+319 16.3M RLT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



DEPTH (m)	SOIL DESCRIPTION
0.0	ORGANIC -frozen
	SILT (ML) -frozen
2.0	SILT & ICE (ML)
	SANDY SILT (ML) -brown -frozen -grindy drilling
4.0	END HOLE @ 4.0m Note: culvert installation outlet

SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL
☒	309	ML	▥
☒	310	ML	▥
☒	311	ML	▥
☒	312	ML	▥

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.0 m
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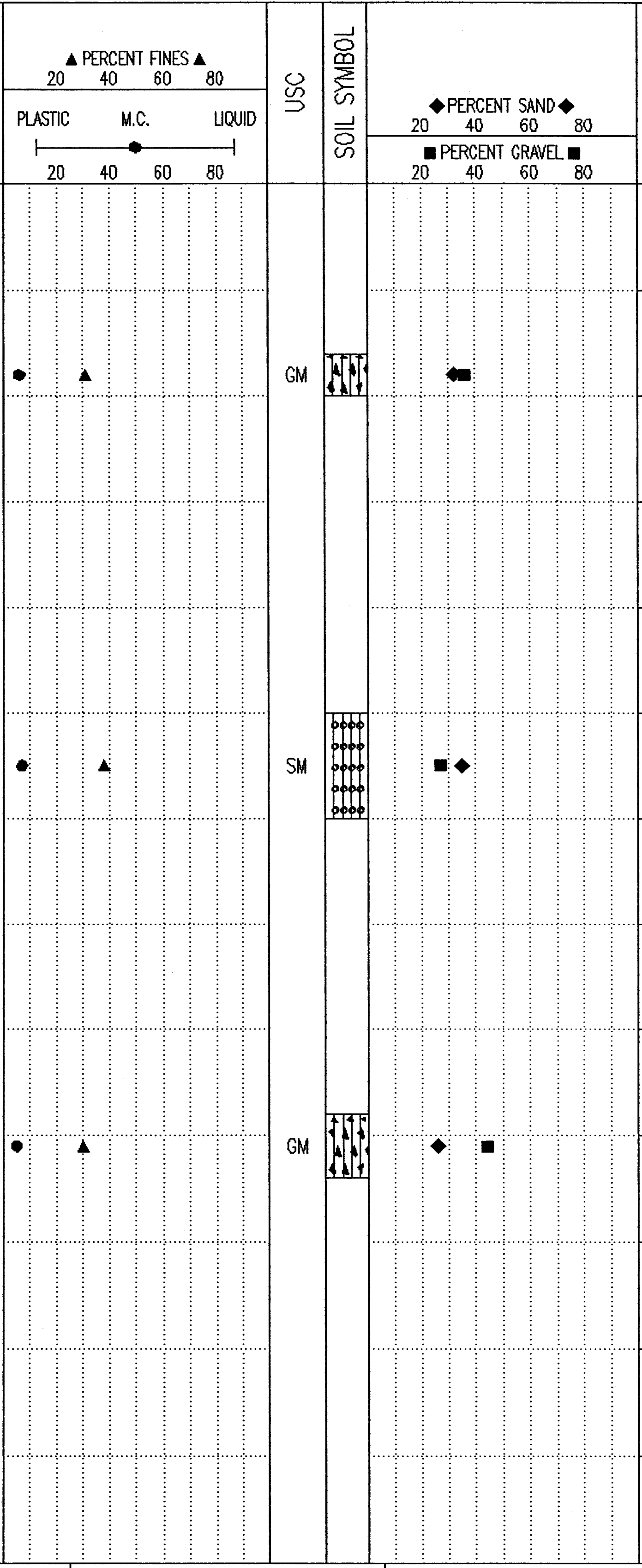
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544–1377
ENGINEERNG CAPITAL	KM 1729–1787 A/H	Project No: 092–202101–0361
B–40L	LOCATION: 1748+452 0.8M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◩ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

SOIL DESCRIPTION

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC			
	SILTY GRAVEL WITH SAND (GM) –brown –frozen –grindy drilling below .3m	☒	313	GM
1.0				
	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)–(GM) –brown –moist –easier drilling			
2.0		☒	314	SM
3.0				
4.0		☒	315	GM
	END HOLE @ 4.7m Note: water ponding 1748+375 LHS			
5.0				
6.0				



Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/16
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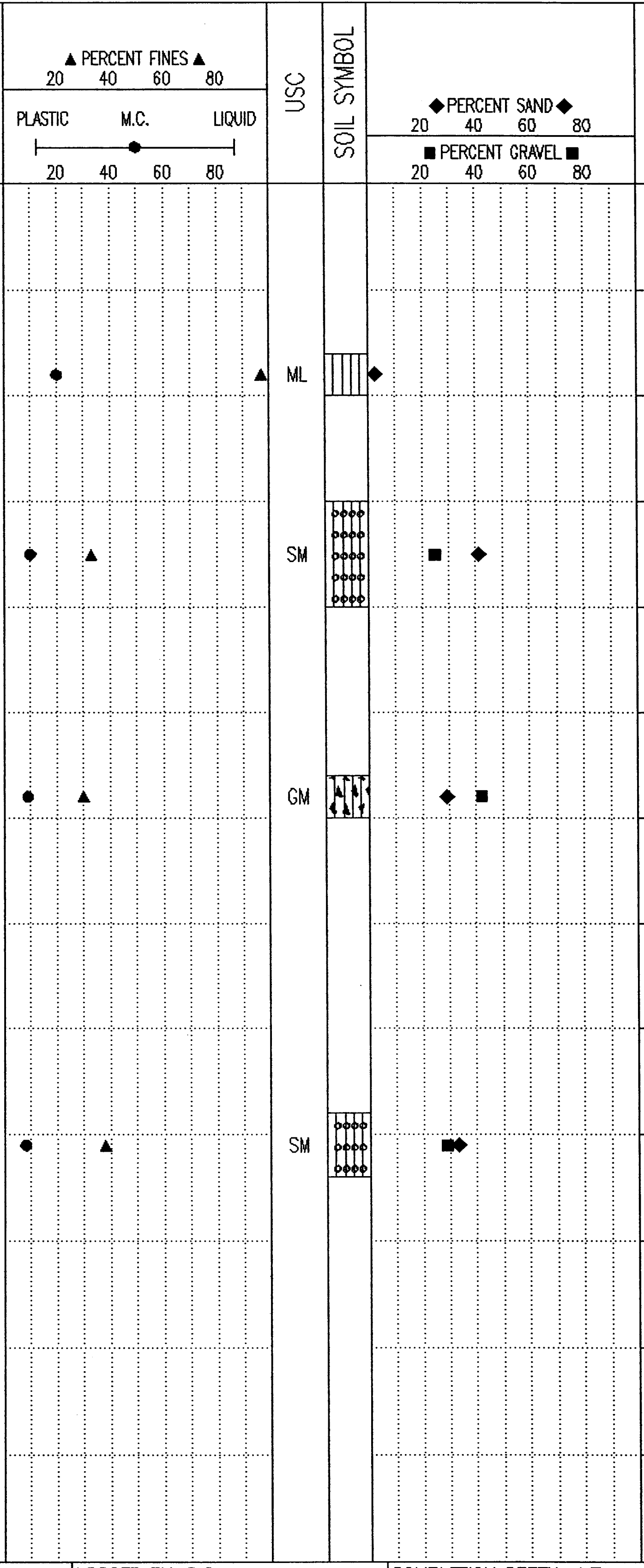
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1378
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1748+552 1.8M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC			
	SILT (ML) -brown -frozen			
1.0		☒	316	ML
	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (SM)-(GM)-(SM) -brown -frozen -grindy drilling	☒	317	SM
2.0				
		☒	318	GM
3.0	-smooth drilling below 3.0m			
4.0				
		☒	319	SM
	END HOLE @ 4.7m			
5.0				
6.0				



Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.7 m
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1379
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1748+664 6.4M RT	ELEVATION: 0.00 (m)

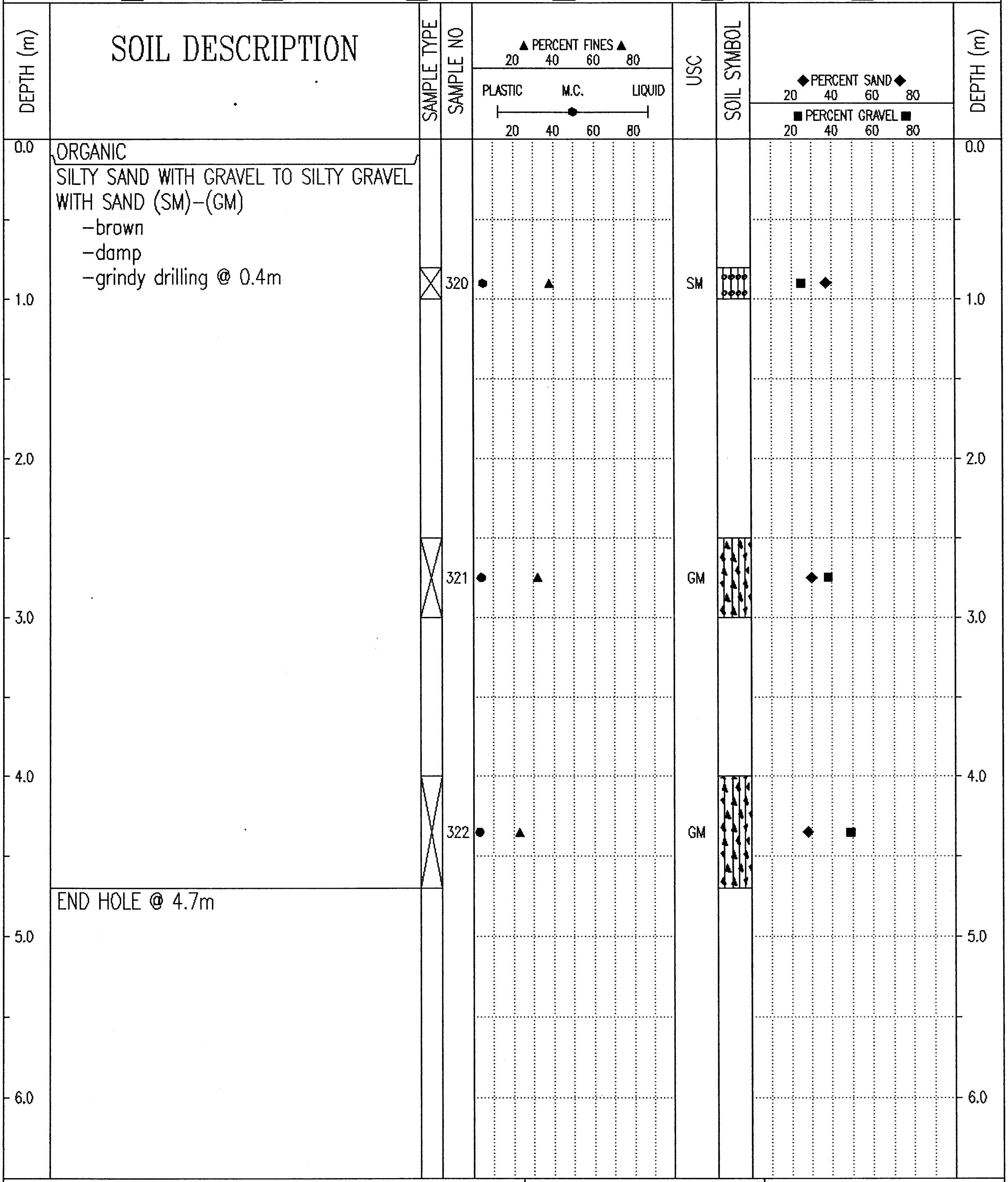
SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

SOIL DESCRIPTION

ORGANIC

SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM)
- brown
- damp
- grindy drilling @ 0.4m

END HOLE @ 4.7m



Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/16
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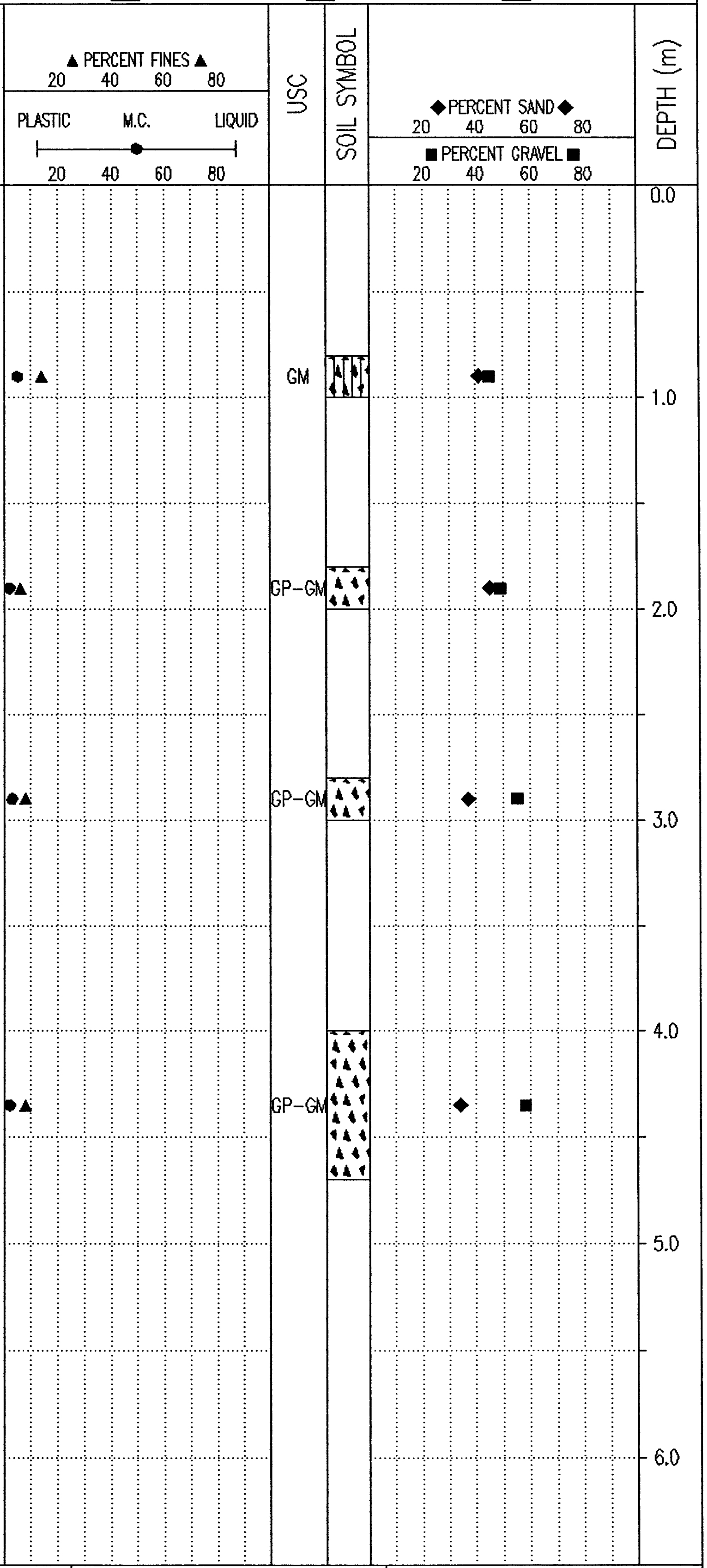
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1380
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1748+765 0.25M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◩ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC			
	SILTY GRAVEL WITH SAND (GM) -brown -damp	☒	323	GM
1.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown -damp -rough drilling	☒	324	GP-GM
		☒	325	GP-GM
		☒	326	GP-GM
	END HOLE @ 4.7m			



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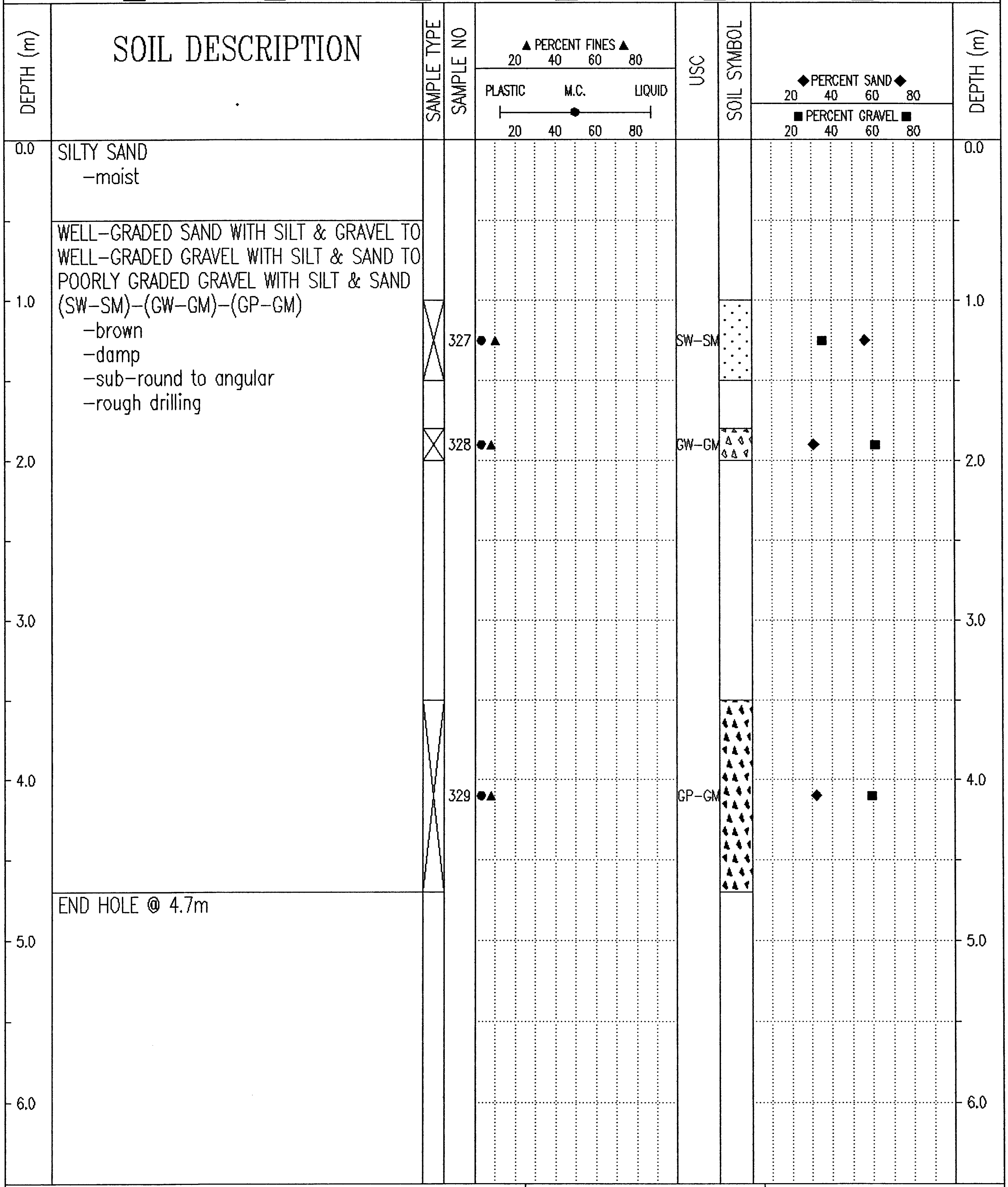
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1381
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1748+878 CL	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



SILTY SAND
-moist

WELL-GRADED SAND WITH SILT & GRAVEL TO WELL-GRADED GRAVEL WITH SILT & SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (SW-SM)-(GW-GM)-(GP-GM)
-brown
-damp
-sub-round to angular
-rough drilling

END HOLE @ 4.7m

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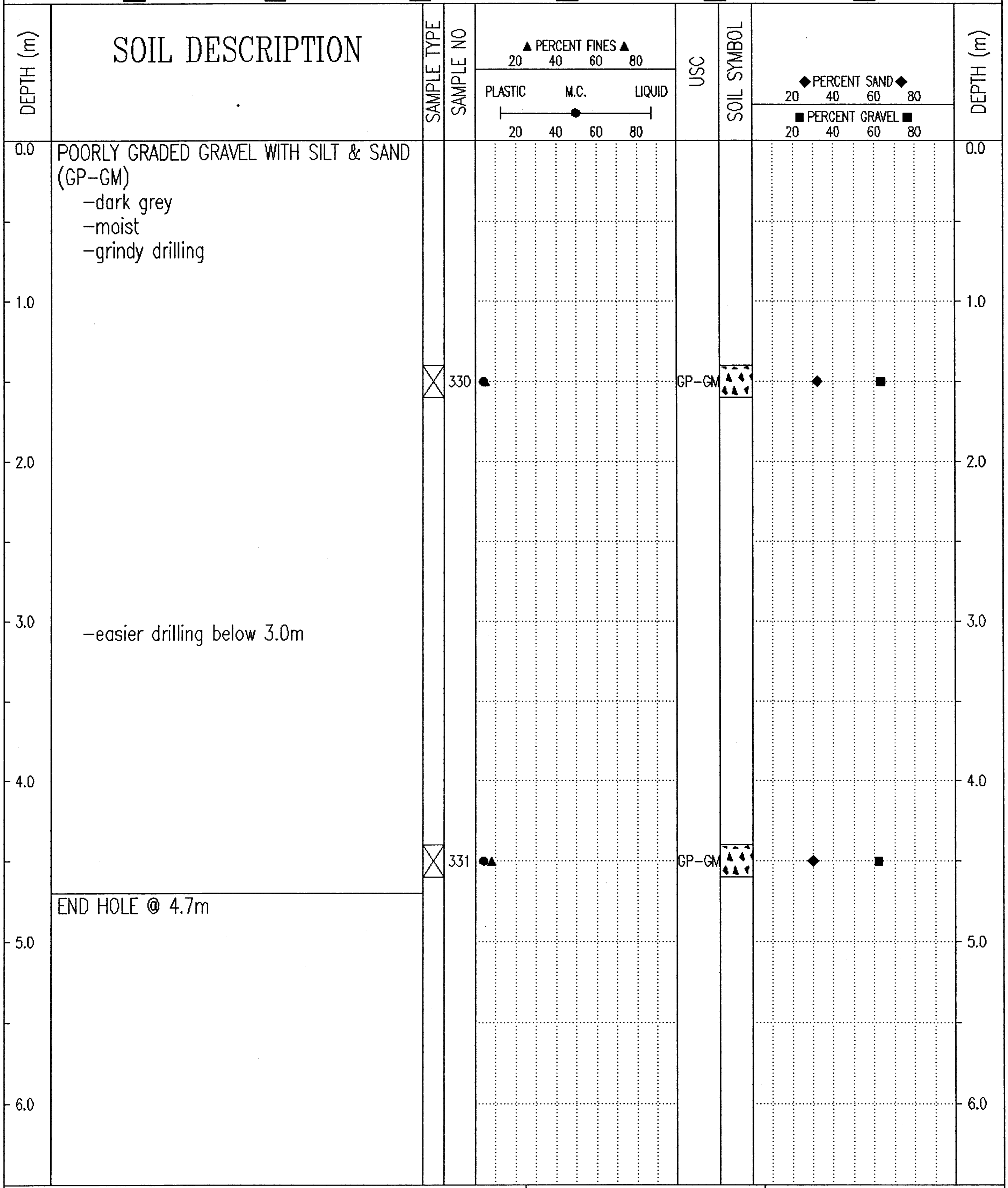
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1382
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1748+928 12.5M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)
- -dark grey
- -moist
- -grindy drilling
- -easier drilling below 3.0m

END HOLE @ 4.7m

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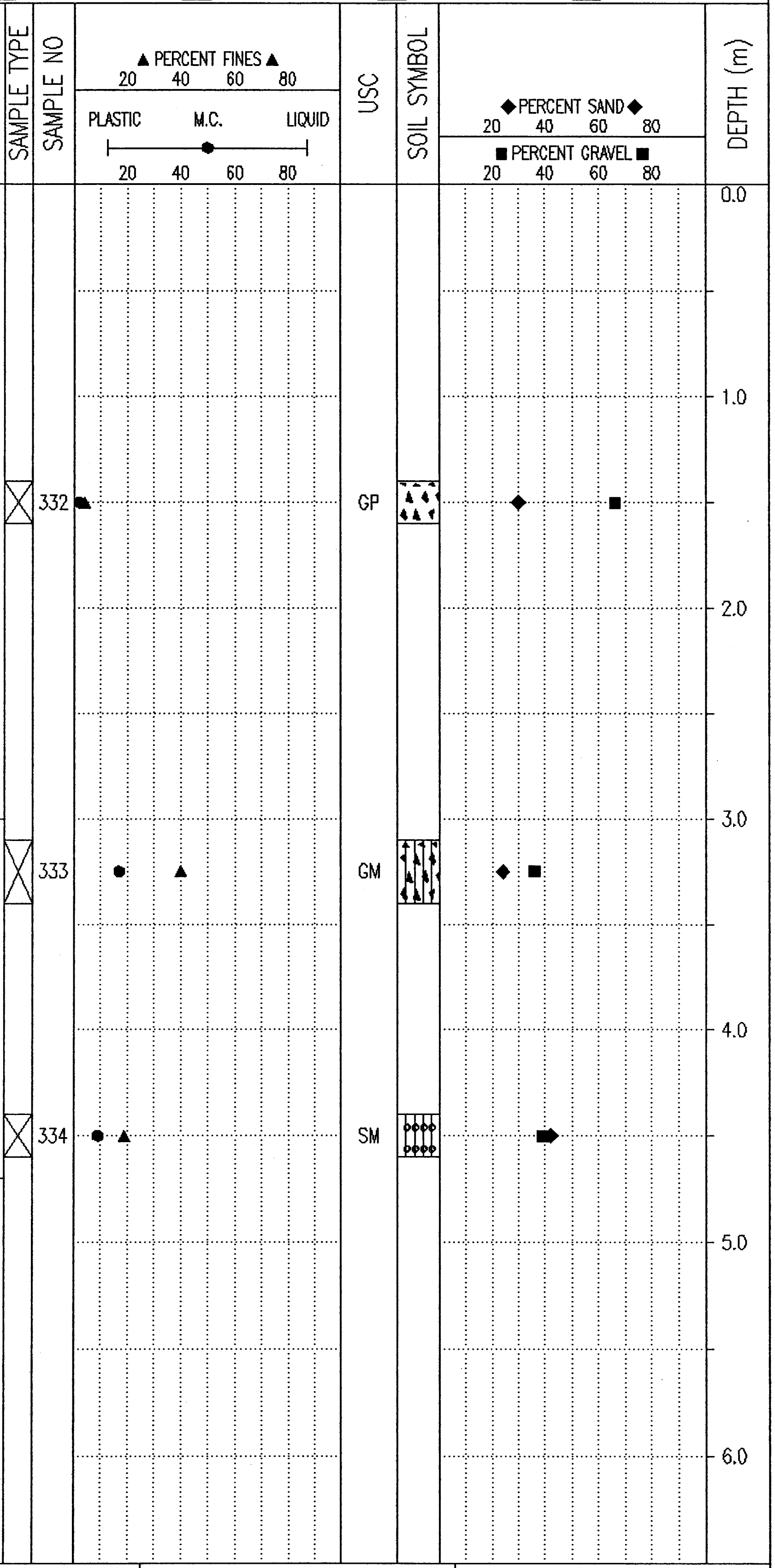
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1383
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1748+926 25M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◩ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	POORLY GRADED GRAVEL WITH SAND (GP) -dark grey -moist
3.0	SILTY GRAVEL WITH SAND TO SILTY SAND WITH WITH GRAVEL (GM)-(SM) -brown -dark grey -saturated -easier drilling
	END HOLE @ 4.7m



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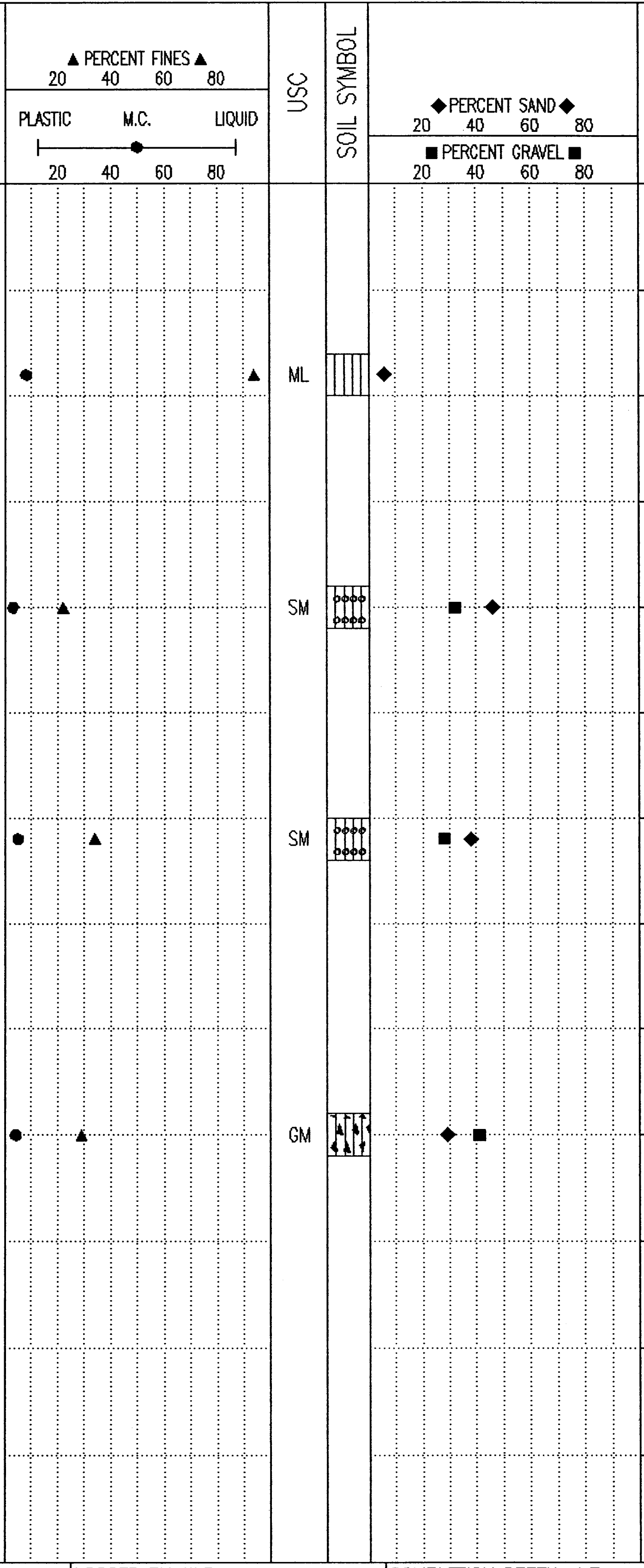
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544–1384
ENGINEERNG CAPITAL	KM 1729–1787 A/H	Project No: 092–202101–0361
B-40L	LOCATION: 1749+030 4M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◩ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ◫ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC –trace ash –smooth drilling			
	SILT (ML) –reddish grey / brown –damp	☒	335	ML
1.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)–(GM) –slightly reddish brown –damp –grindy drilling			
2.0		☒	336	SM
3.0	–olive brown below 3.0m	☒	337	SM
4.0		☒	338	GM
	END HOLE @ 4.7m			
5.0				
6.0				



Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544–1385
ENGINEERNG CAPITAL	KM 1729–1787 A/H	Project No: 092–202101–0361
B–40L	LOCATION: 1749+115 6.5M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ◨ CORE

SOIL DESCRIPTION

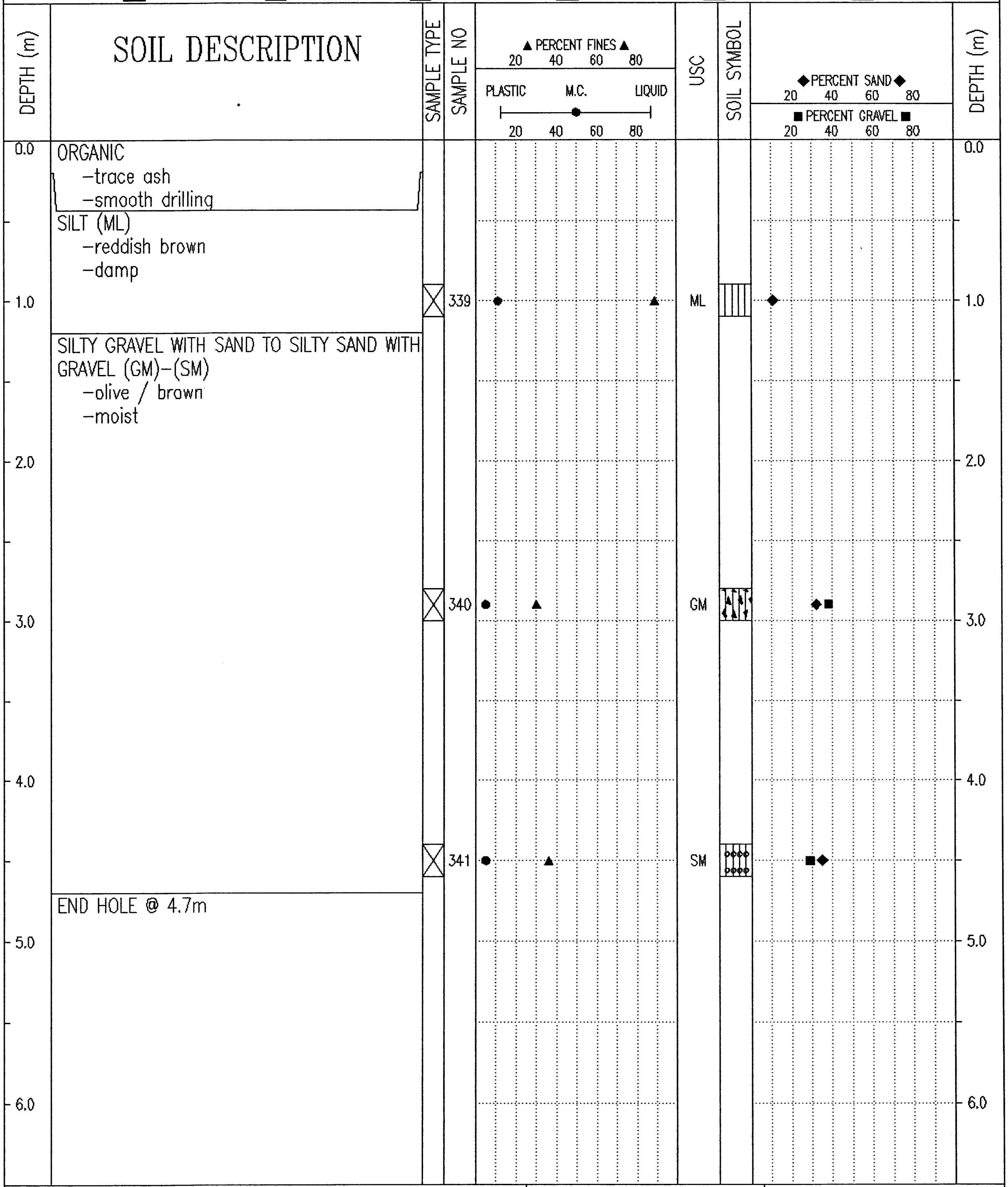
DEPTH (m)

0.0 ORGANIC
- –trace ash
- –smooth drilling

SILT (ML)
- –reddish brown
- –damp

SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)–(SM)
- –olive / brown
- –moist

END HOLE @ 4.7m



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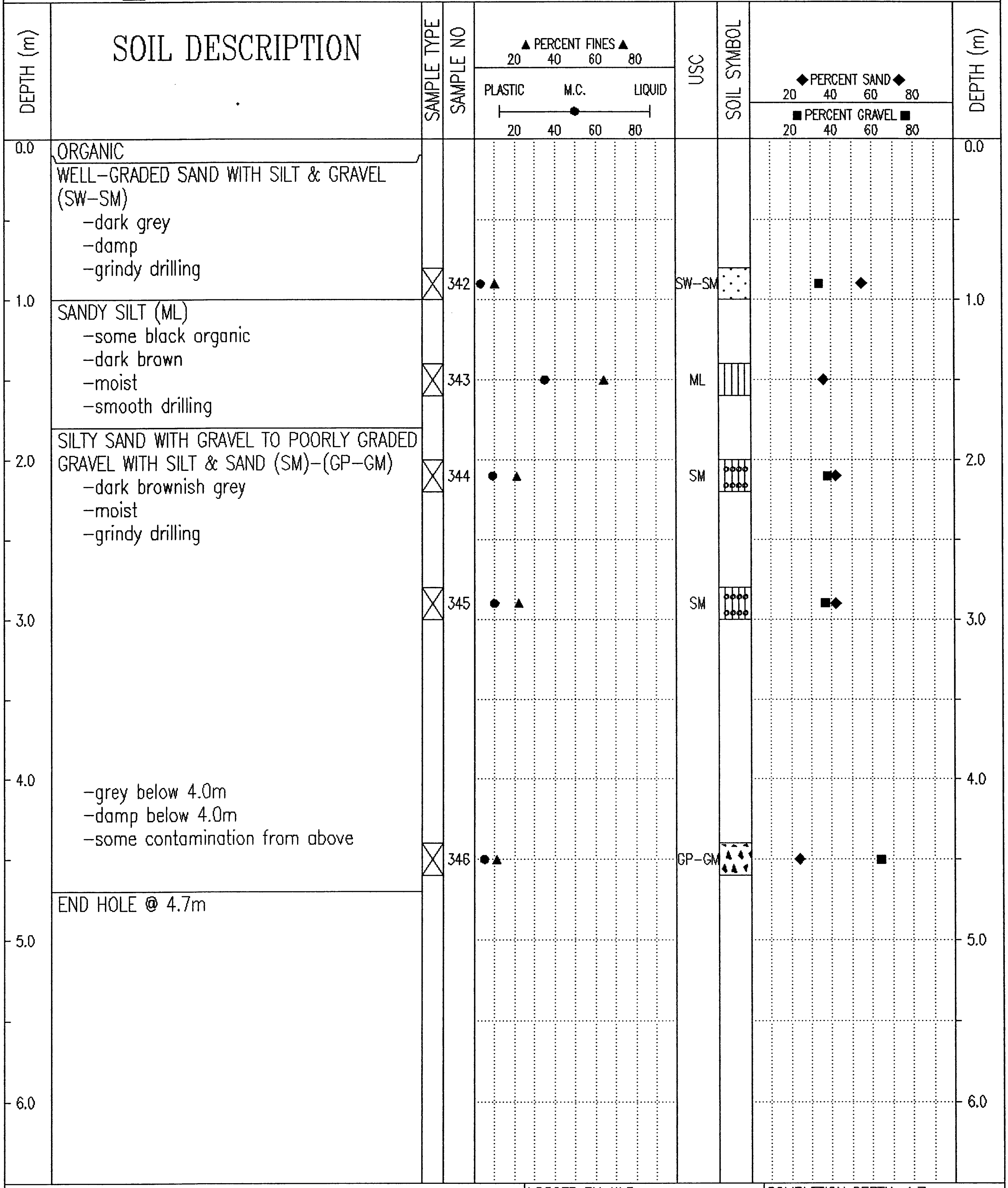
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544–1386
ENGINEERNG CAPITAL	KM 1729–1787 A/H	Project No: 092–202101–0361
B–40L	LOCATION: 1749+246 18.9M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ⊠ AUGER ☰ BULK ▥ TUBE ◨ CORE



SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
ORGANIC			
WELL–GRADED SAND WITH SILT & GRAVEL (SW–SM) –dark grey –damp –grindy drilling	⊠	342	SW–SM
SANDY SILT (ML) –some black organic –dark brown –moist –smooth drilling	⊠	343	ML
SILTY SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SILT & SAND (SM)–(GP–GM) –dark brownish grey –moist –grindy drilling	⊠	344	SM
	⊠	345	SM
–grey below 4.0m –damp below 4.0m –some contamination from above	⊠	346	GP–GM
END HOLE @ 4.7m			

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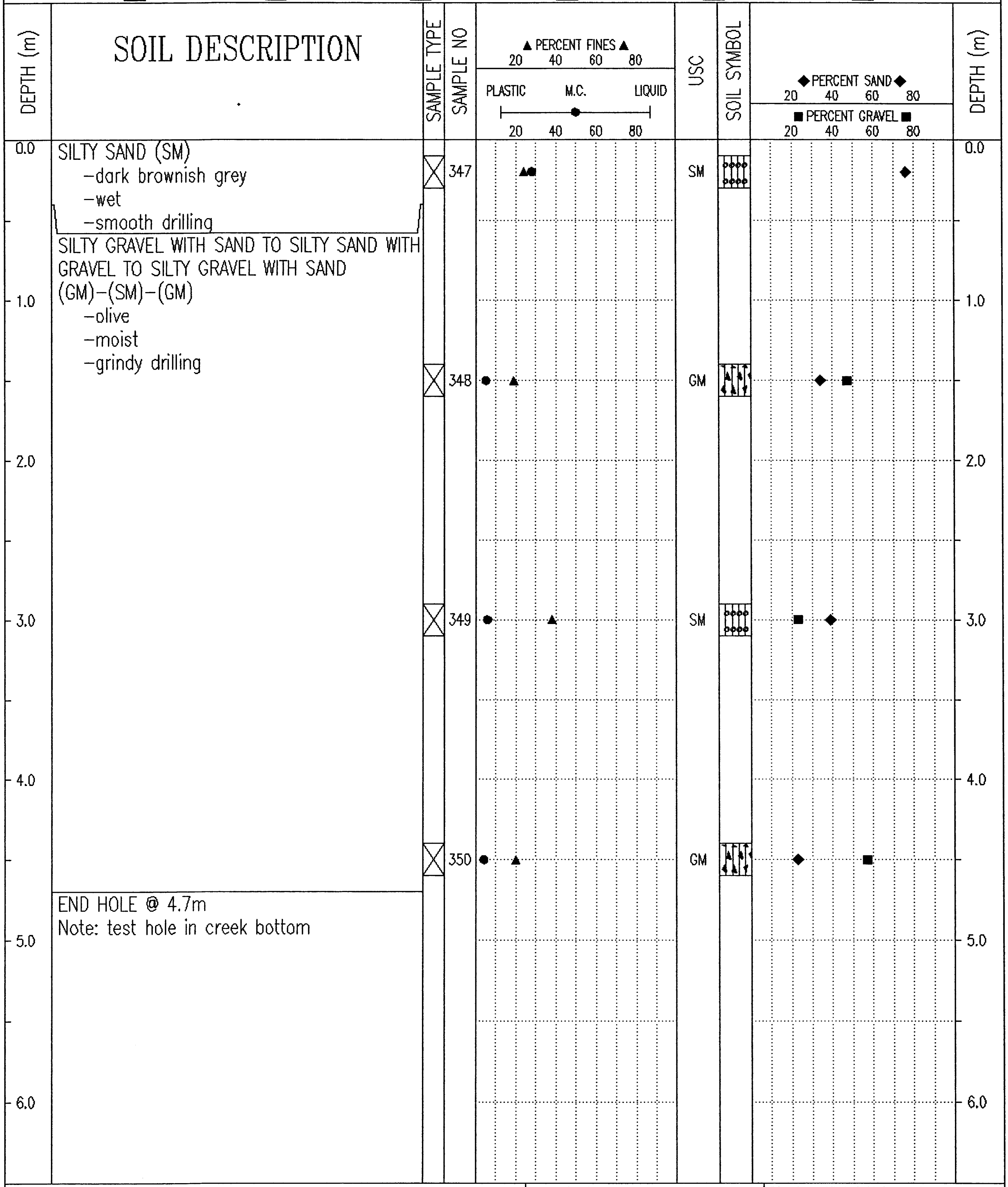
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1387
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1749+264 18M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SILTY SAND (SM)
-dark brownish grey
-wet
-smooth drilling

SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (GM)-(SM)-(GM)
-olive
-moist
-grindy drilling

END HOLE @ 4.7m
Note: test hole in creek bottom

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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1388
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1749+353 0.2M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)

SOIL DESCRIPTION

0.0 SAND, SILT & ORGANIC
- recent outwash

1.0

POORLY GRADED GRAVEL WITH SAND TO SILTY GRAVEL WITH SAND (GM)
- dark brownish grey
- moist
- grindy drilling

2.0

3.0

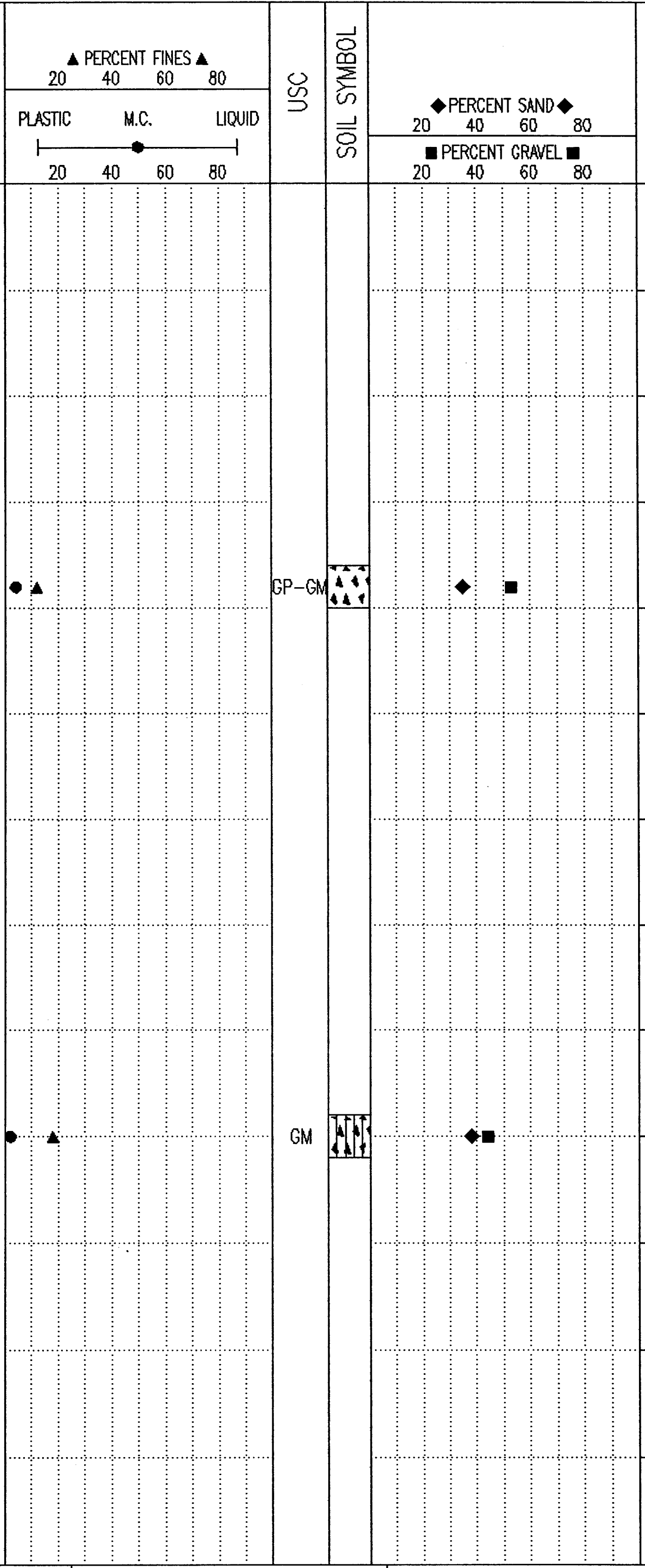
4.0

END HOLE @ 4.7m

5.0

6.0

SAMPLE TYPE	SAMPLE NO	USC
☒	351	GP-GM
☒	352	GM



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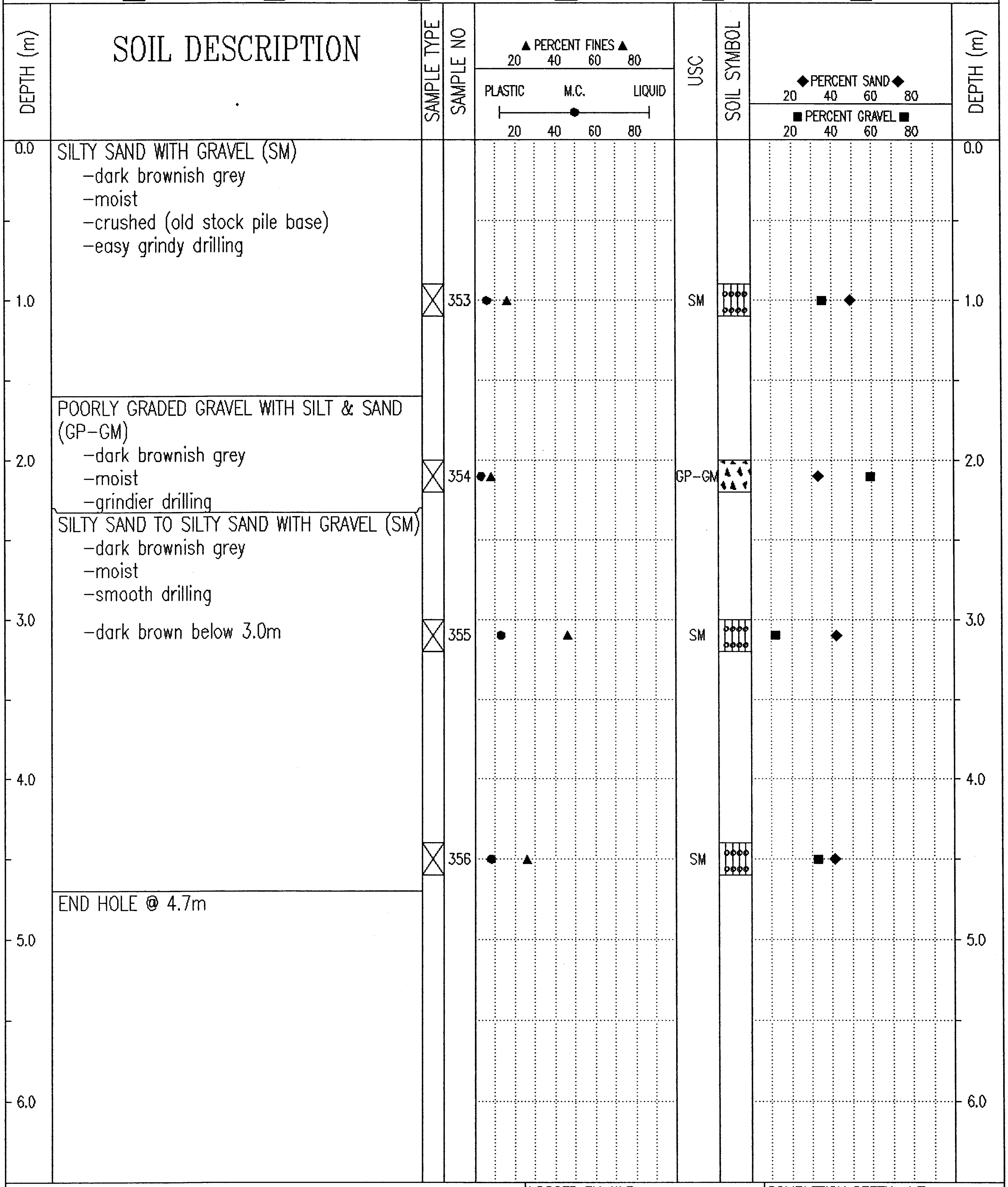
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1389
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1749+449 2.1M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ◧ CORE



SILTY SAND WITH GRAVEL (SM)
- -dark brownish grey
- -moist
- -crushed (old stock pile base)
- -easy grindy drilling

POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)
- -dark brownish grey
- -moist
- -grindier drilling

SILTY SAND TO SILTY SAND WITH GRAVEL (SM)
- -dark brownish grey
- -moist
- -smooth drilling
- -dark brown below 3.0m

END HOLE @ 4.7m

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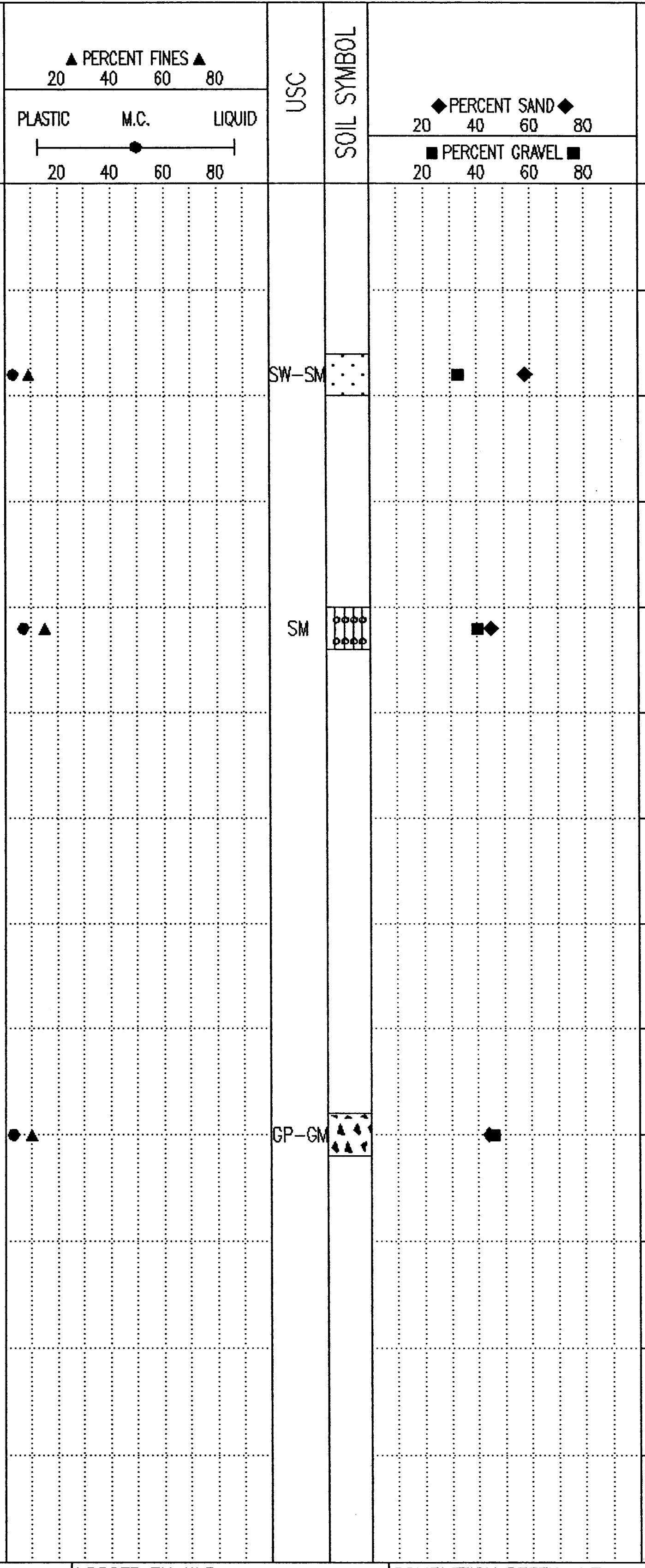
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1390
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1749+550 7.8M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -dark grey -wet -easy grindy drilling			
0.9		☒	357	SW-SM
1.2	SILTY SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SILT & SAND (SM)-(GP) -dark brownish grey -wet -coarser			
2.1		☒	358	SM
4.0	-moist below 4.0m			
4.5		☒	359	GP-GM
4.7	END HOLE @ 4.7m			



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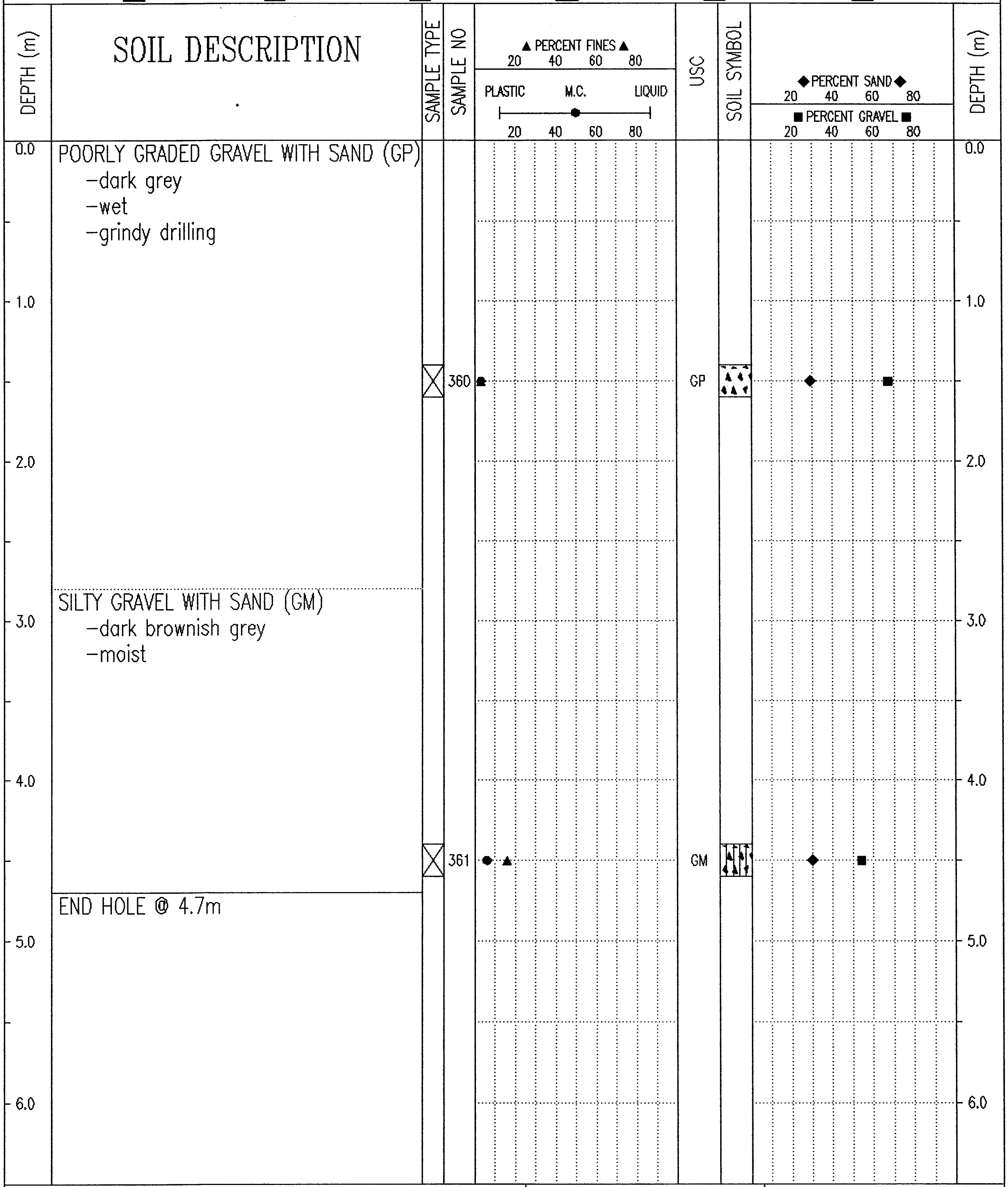
SUBSURFACE EXPLORATION & TESTING REPORT | SHAKWAK SEG 11 | TEST HOLE NO: 544–1391
ENGINEERNG CAPITAL | KM 1729–1787 A/H | Project No: 092–202101–0361
B–40L | LOCATION: 1749+647 1.3M RT | ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



POORLY GRADED GRAVEL WITH SAND (GP)
- dark grey
- wet
- grindy drilling

SILTY GRAVEL WITH SAND (GM)
- dark brownish grey
- moist

END HOLE @ 4.7m

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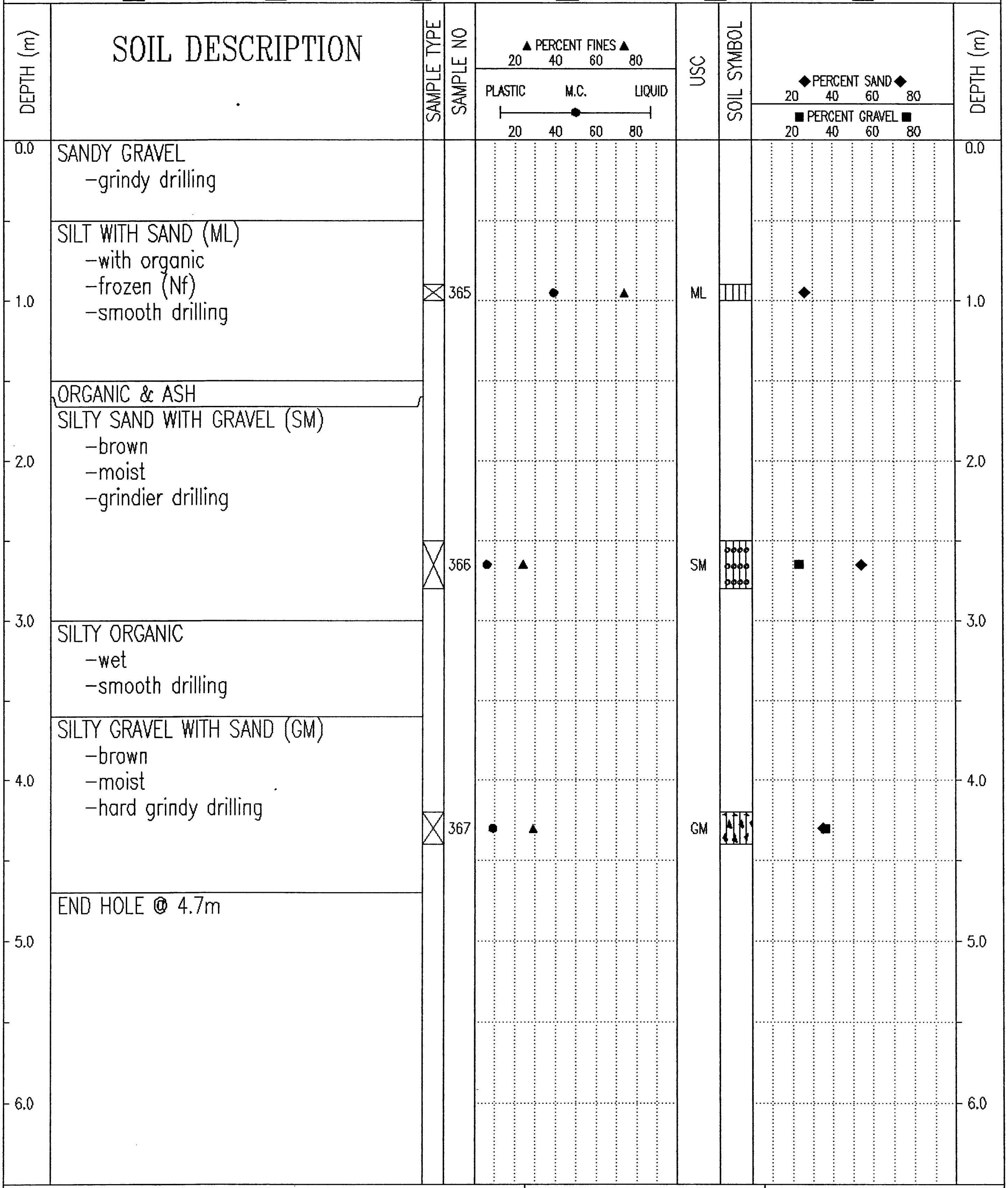
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1393
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1749+671 18M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SANDY GRAVEL
- grindy drilling

SILT WITH SAND (ML)
- with organic
- frozen (Nf)
- smooth drilling

ORGANIC & ASH

SILTY SAND WITH GRAVEL (SM)
- brown
- moist
- grindier drilling

SILTY ORGANIC
- wet
- smooth drilling

SILTY GRAVEL WITH SAND (GM)
- brown
- moist
- hard grindy drilling

END HOLE @ 4.7m

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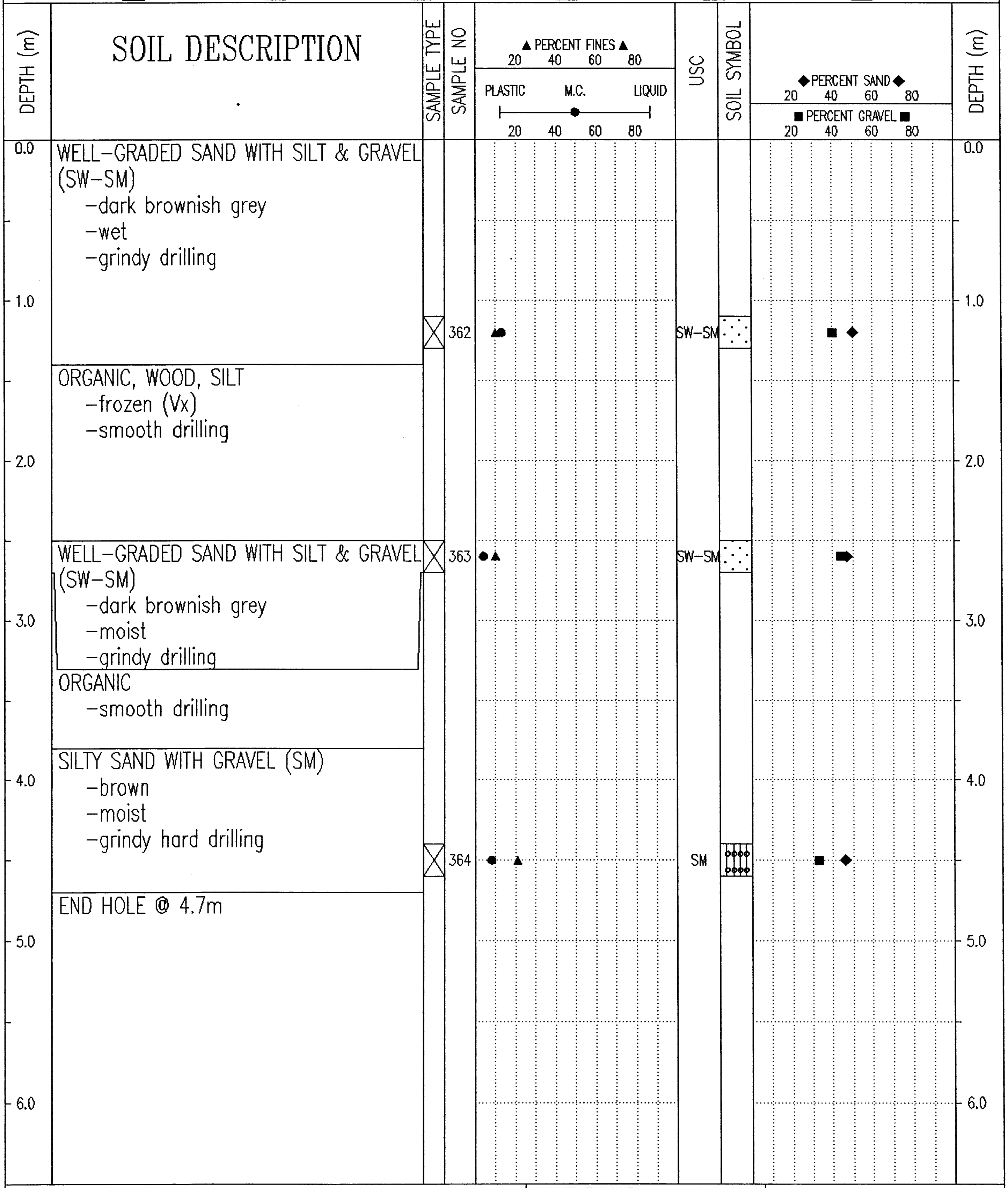
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1392
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1749+676 10M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



Depth (m)	Soil Description	Sample Type	Sample No	USC
0.0	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -dark brownish grey -wet -grindy drilling	☒	362	SW-SM
	ORGANIC, WOOD, SILT -frozen (Vx) -smooth drilling			
	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -dark brownish grey -moist -grindy drilling	☒	363	SW-SM
	ORGANIC -smooth drilling			
	SILTY SAND WITH GRAVEL (SM) -brown -moist -grindy hard drilling	☒	364	SM
	END HOLE @ 4.7m			

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	REVIEWED BY:	COMPLETE: 00/05/17
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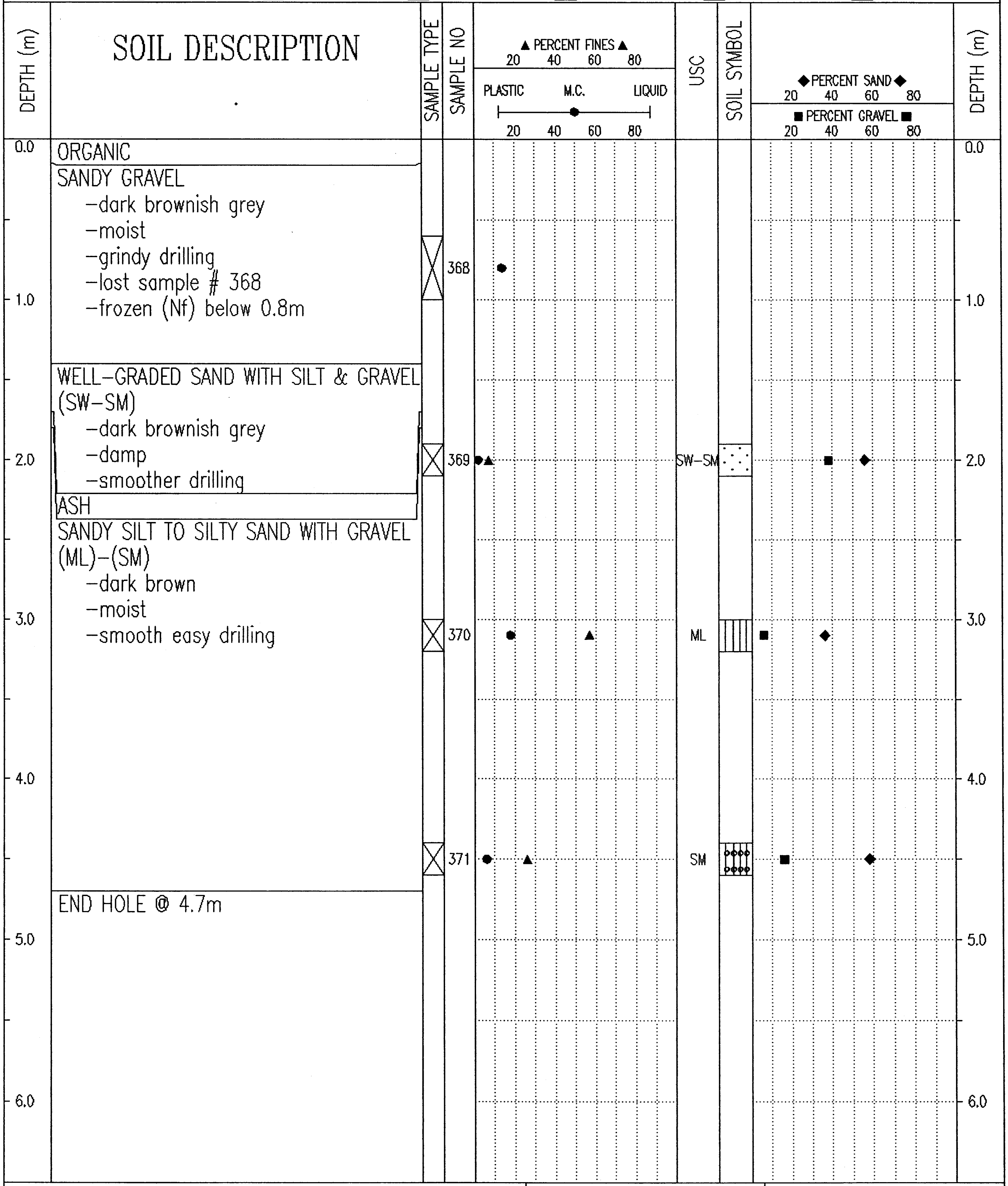
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1394
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1749+789 4.8M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SOIL DESCRIPTION

ORGANIC

SANDY GRAVEL
- dark brownish grey
- moist
- grindy drilling
- lost sample # 368
- frozen (Nf) below 0.8m

WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)
- dark brownish grey
- damp
- smoother drilling

ASH

SANDY SILT TO SILTY SAND WITH GRAVEL (ML)-(SM)
- dark brown
- moist
- smooth easy drilling

END HOLE @ 4.7m

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COMPLETION DEPTH: 4.7 m	COMPLETE: 00/05/17
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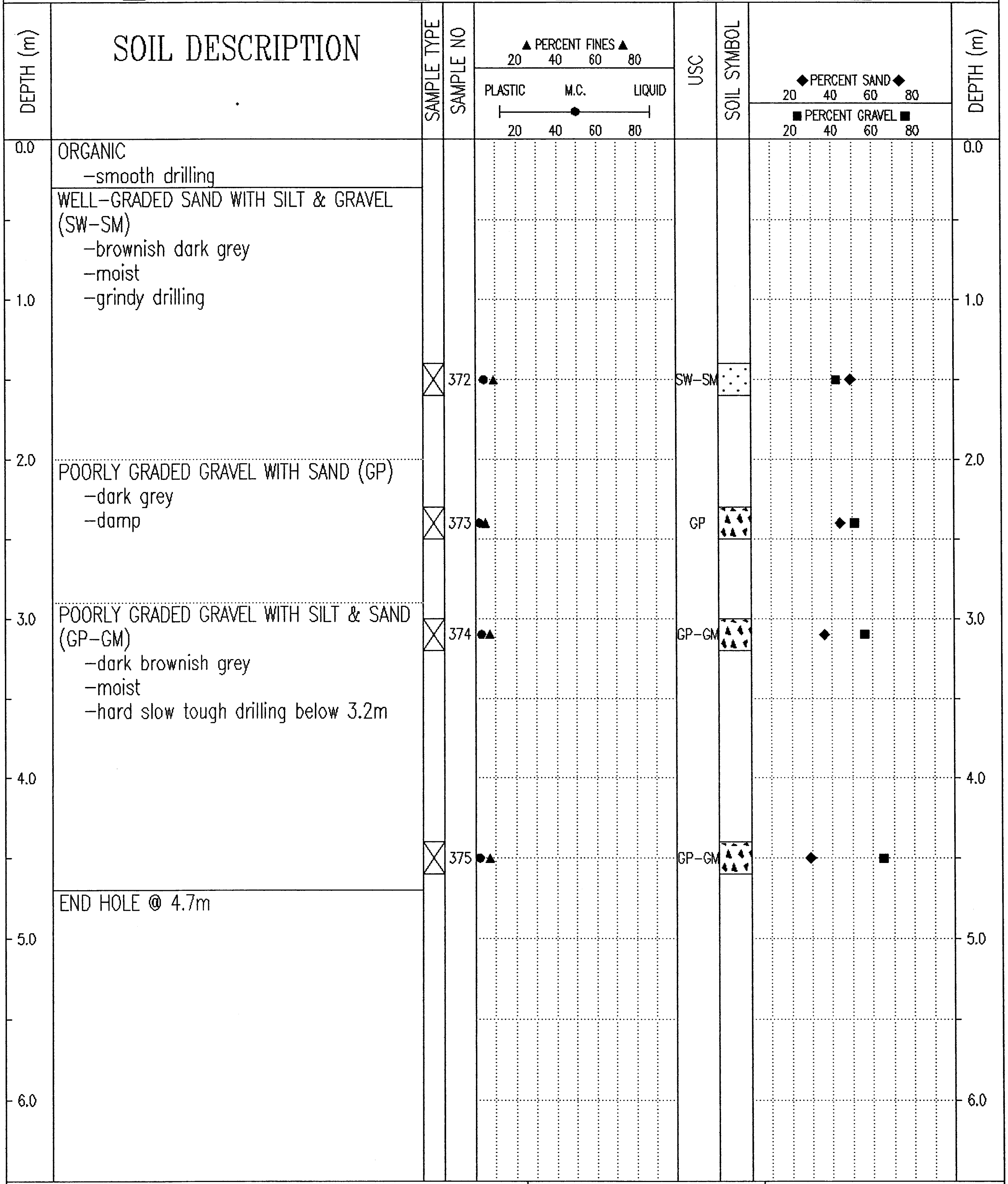
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1395
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1749+892 32.6M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ▮ CORE



SOIL DESCRIPTION

DEPTH (m)	SOIL DESCRIPTION
0.0	ORGANIC -smooth drilling
	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -brownish dark grey -moist -grindy drilling
2.0	POORLY GRADED GRAVEL WITH SAND (GP) -dark grey -damp
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -dark brownish grey -moist -hard slow tough drilling below 3.2m
	END HOLE @ 4.7m

SAMPLE TYPE	SAMPLE NO	USC
☒	372	SW-SM
☒	373	GP
☒	374	GP-GM
☒	375	GP-GM

Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/17
	Fig. No:	Page 1 of 1

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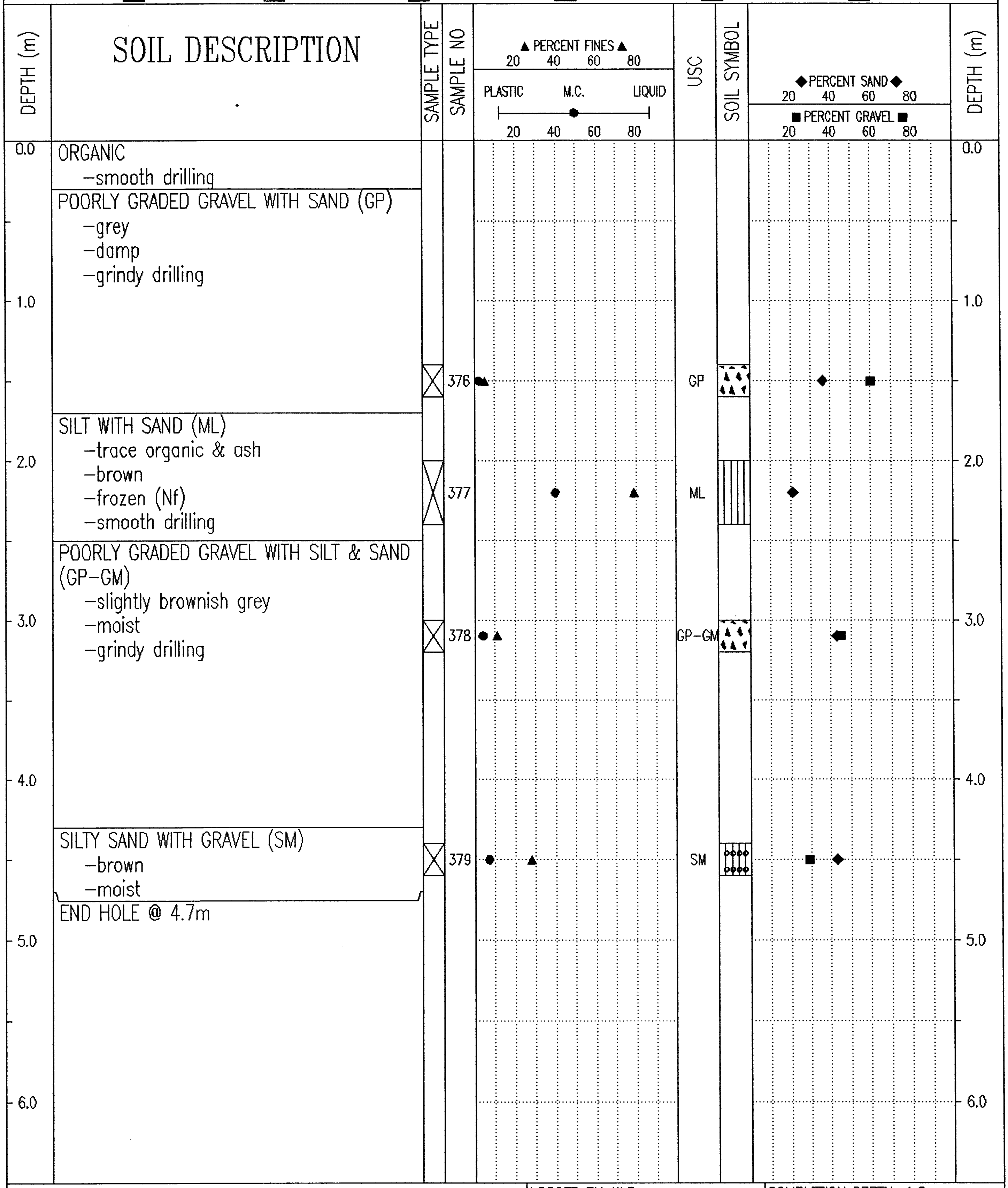
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1396
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1750+002 56.6M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▧ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



ORGANIC
- smooth drilling

POORLY GRADED GRAVEL WITH SAND (GP)
- grey
- damp
- grindy drilling

SILT WITH SAND (ML)
- trace organic & ash
- brown
- frozen (Nf)
- smooth drilling

POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)
- slightly brownish grey
- moist
- grindy drilling

SILTY SAND WITH GRAVEL (SM)
- brown
- moist

END HOLE @ 4.7m

Government of Yukon
Transportation Engineering

LOGGED BY: W.E.	COMPLETION DEPTH: 4.6 m
REVIEWED BY:	COMPLETE: 00/05/17
Fig. No:	Page 1 of 1

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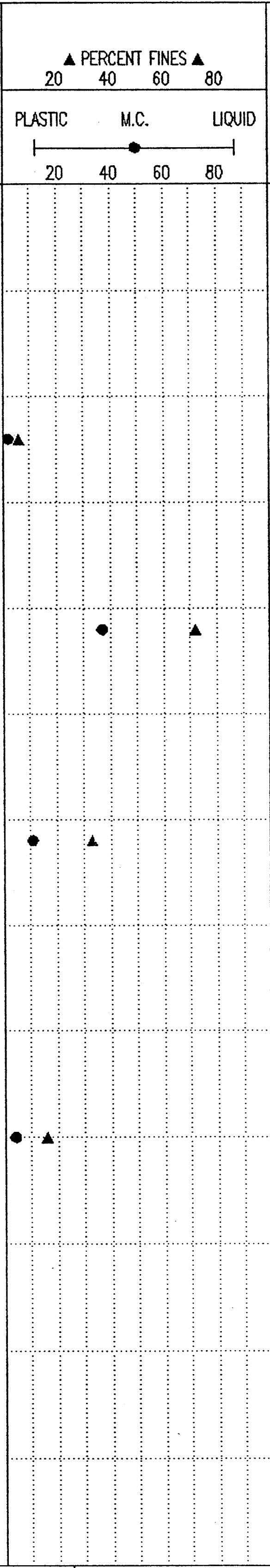
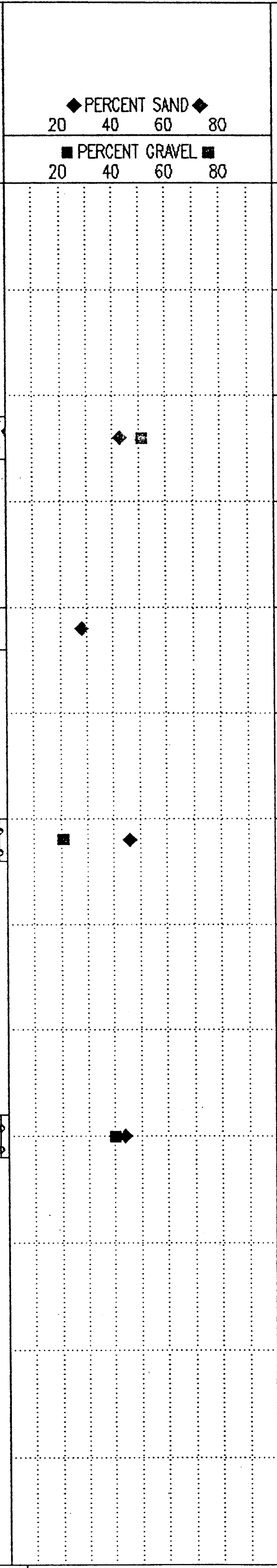
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1397
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1750+106 59.2M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ◧ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC, WOOD -seasonal ice & snow			
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -grey -damp -grindy drilling	☒	380	GP-GM
	SILT WITH SAND (ML) -trace organic -brown -frozen (Nf) -smooth drilling	☒	381	ML
	SILTY SAND WITH GRAVEL (SM) -brown -moist	☒	382	SM
	-hard grindy drilling below 3.5m	☒	383	SM
	END HOLE @ 4.7m			





DEPTH (m): 0.0, 1.0, 2.0, 3.0, 4.0, 5.0, 6.0

Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/17
	Fig. No:	Page 1 of 1

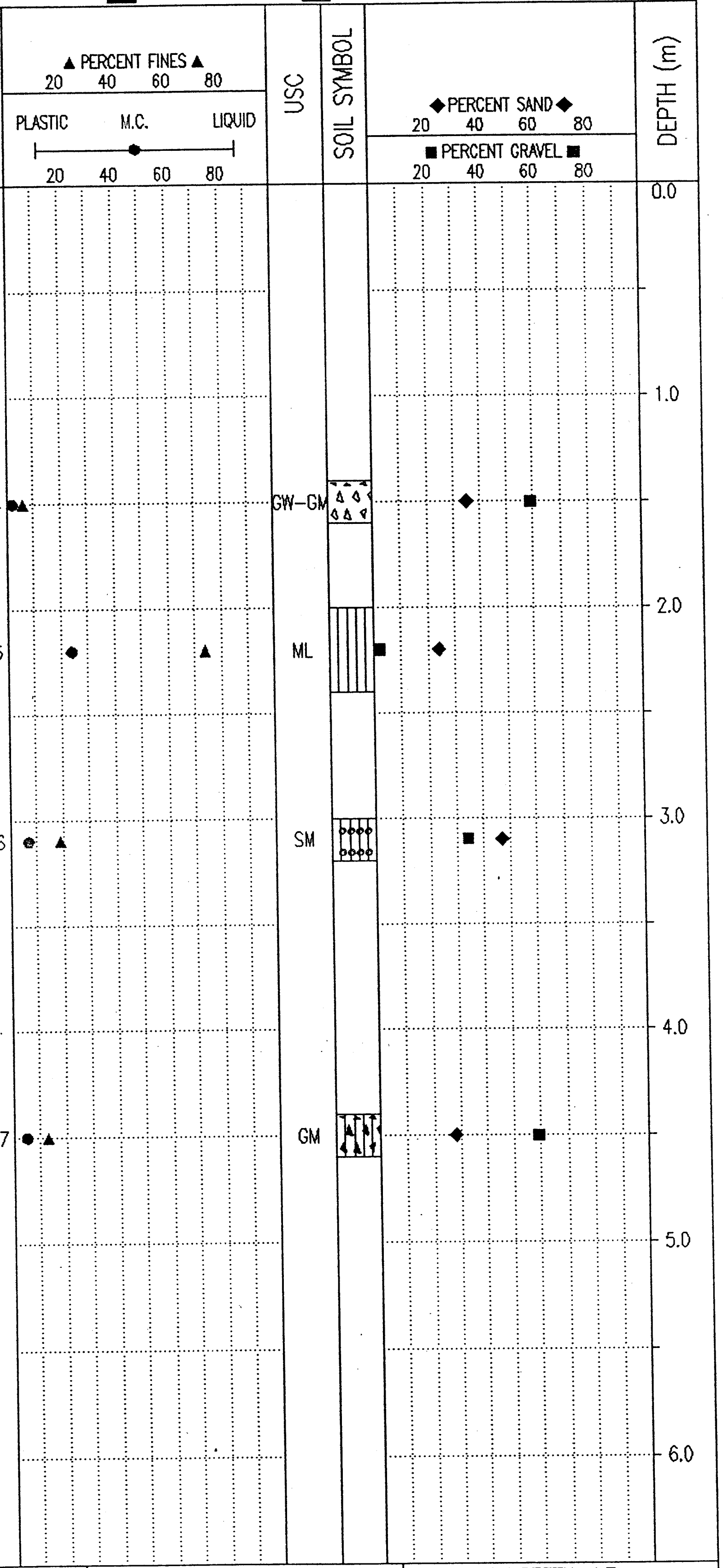
02/02/18 09:53AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1398
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1750+200 15M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM) -grey -damp -grindy drilling below 0.3m
1.0	
2.0	SILT WITH SAND TO SILTY SAND WITH GRAVEL (ML)-(SM) -brown -frozen (Nf) -smooth drilling
3.0	-moist below 3.0m
4.0	SILTY GRAVEL WITH SAND (GM) -brown -moist -grindier drilling
5.0	END HOLE @ 4.7m
6.0	

SAMPLE TYPE	SAMPLE NO	USC
☒	384	GW-GM
☒	385	ML
☒	386	SM
☒	387	GM



Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/17
	Fig. No:	Page 1 of 1

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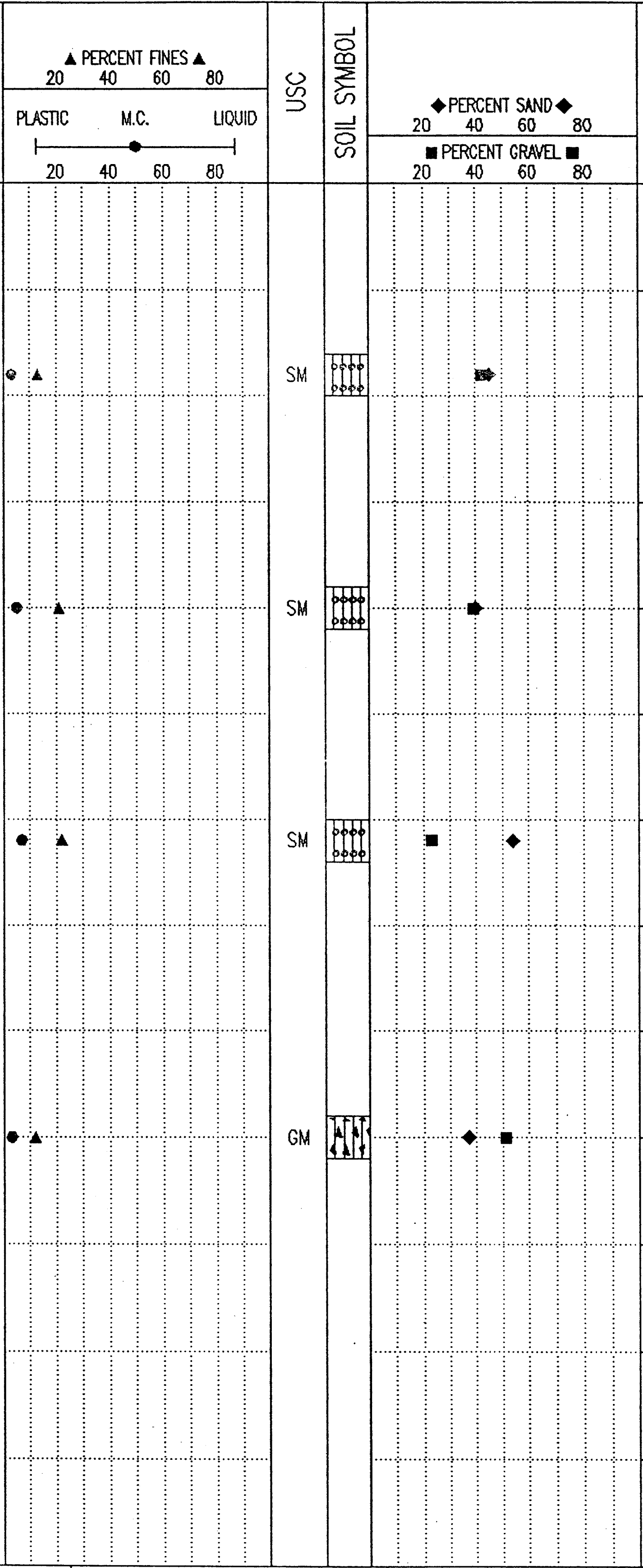
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1399
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1750+240 15M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ◧ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	SILTY SAND WITH GRAVEL (SM) -grey -damp -grindy drilling below 0.3m			
		☒	388	SM
1.0	ASH & ORGANIC -moist -smooth drilling			
2.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM) -brown -damp -contamination from above -grindy drilling	☒	389	SM
3.0	-dark brown below 3.0m	☒	390	SM
	-rockier below 3.3m			
4.0				
		☒	391	GM
	END HOLE @ 4.7m			
5.0				
6.0				



DEPTH (m) 0.0 1.0 2.0 3.0 4.0 5.0 6.0

Government of Yukon
Transportation Engineering

LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/05/17
Fig. No:	Page 1 of 1

01/01/26 09:03AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1400
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1750+300 CL	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE

SOIL DESCRIPTION

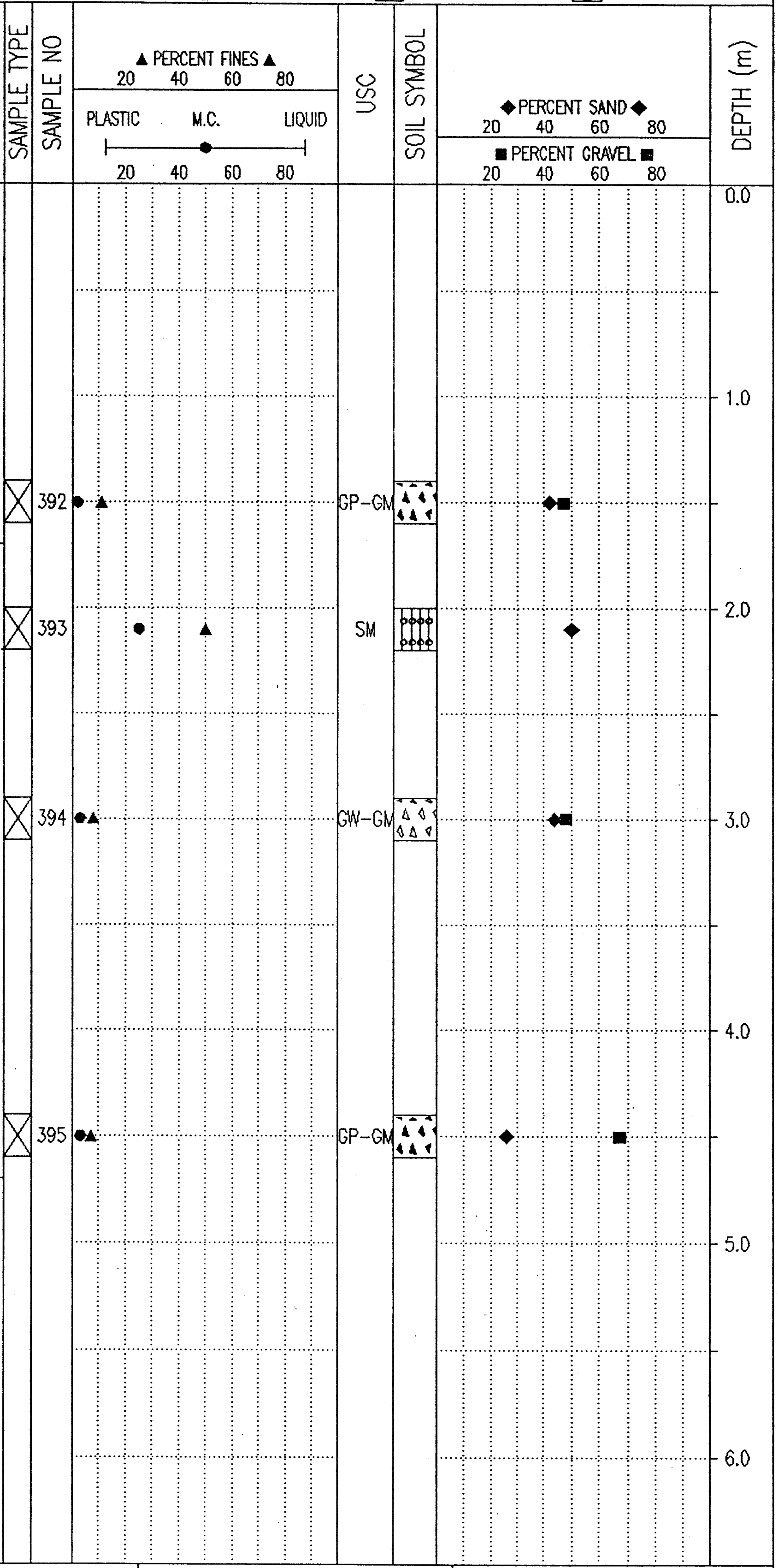
DEPTH (m)

0.0 POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)
- grey
- damp
- grindy drilling below 0.5m

SILTY SAND (SM)
- dark brownish grey
- frozen (Nf)
- smooth drilling

WELL TO POORLY GRADED GRAVEL WITH SILT & SAND (GW-GM)-(GP-GM)
- brownish grey
- moist
- grindy drilling
- rockier below 3.2m

END HOLE @ 4.7m



Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/17
	Fig. No:	Page 1 of 1

01/01/15 12:02PM

GEOTECHNICAL INVESTIGATIONS

Highway Construction
Km 1738.3 to 1750.2 Highway #1
Yukon, 2002-2003
Volume 2 of 4

Yukon
Community and Transportation Services
Transportation Engineering Branch

Geotechnical Services

BOX 2703, WHITEHORSE, YUKON
PHONE 867-667-8820   FAX 867-393-6447

ORIGINAL - Do Not Remove From File

Highway Construction
Km 1738.3 to 1750.2
Alaska Highway #1
Yukon 2002-2003

Volume 2 of 4

This Data Package prepared for project viewing:

March, 2002

Transportation Engineering Branch
Geotechnical Services
461 Range Road
Whitehorse, Yukon

CONTENTS

Volume 1 of 4

INTRODUCTION

Investigation notes, classification methods and legends.

CENTRELINE TESTING ALASKA HIGHWAY

Subsurface Exploration and Testing ReportSheets are provided.
The reports for the centreline holes are arranged according to project location, starting at Km 1775+500 and increasing to Km 1786+500.

TEST HOLES 1292 to 1326	shown with prefix 541-
TEST HOLES 1327 to 1333	shown with prefix 542-
TEST HOLES 1334 to 1369	shown with prefix 543-
TEST HOLES 1370 to 1400	shown with prefix 544-
TEST HOLES 287 to 332	shown with prefix 611-
TEST HOLES 333 to 353	shown with prefix 612-

NOTE:
Centreline Test Hole locations indicated on the Subsurface Exploration and Testing Report Sheets are approximate. Actual Test Hole locations, located by GPS survey or field survey, are as shown on project plans.

CONTENTS (continued)

Volume 2 of 4

CENTRELINE TESTING ALASKA HIGHWAY

Laboratory Testing Result Sheets are provided.
The reports for the centreline holes are arranged according to test hole number, starting at 541-1292 and increasing to 612-353.

TEST HOLES 1292 to 1326	shown with prefix 541-
TEST HOLES 1327 to 1333	shown with prefix 542-
TEST HOLES 1334 to 1369	shown with prefix 543-
TEST HOLES 1370 to 1400	shown with prefix 544-
TEST HOLES 287 to 332	shown with prefix 611-
TEST HOLES 333 to 353	shown with prefix 612-

NOTE:

Centreline Test Hole locations indicated on the Subsurface Exploration and Testing Report Sheets are approximate. Actual Test Hole locations, located by GPS survey or field survey, are as shown on project plans.

CONTENTS (continued)

Volume 3 of 4

GRANULAR SOURCE Km 1738.8 RHS & LHS ALASKA HIGHWAY

Location plans and subsurface exploration and testing report sheets are provided.

Auger Testing

2001	TEST HOLES 344 & 345	shown with prefix 612-
2001	TEST HOLES 1891 to 1904	shown with prefix 622-

Backhoe Testing

2001	TEST PITS 1699 to 1713	shown with prefix 630-

CONTENTS (continued)

Volume 4 of 4

GRANULAR SOURCE Km 1750.0 LHS ALASKA HIGHWAY

Location plans, photographs, and subsurface exploration and testing report sheets are provided.

Auger Testing

1985	TEST HOLES 32 and 37 to 40	shown with prefix 777-
2001	TEST HOLES 1948 to 1964	shown with prefix 625-

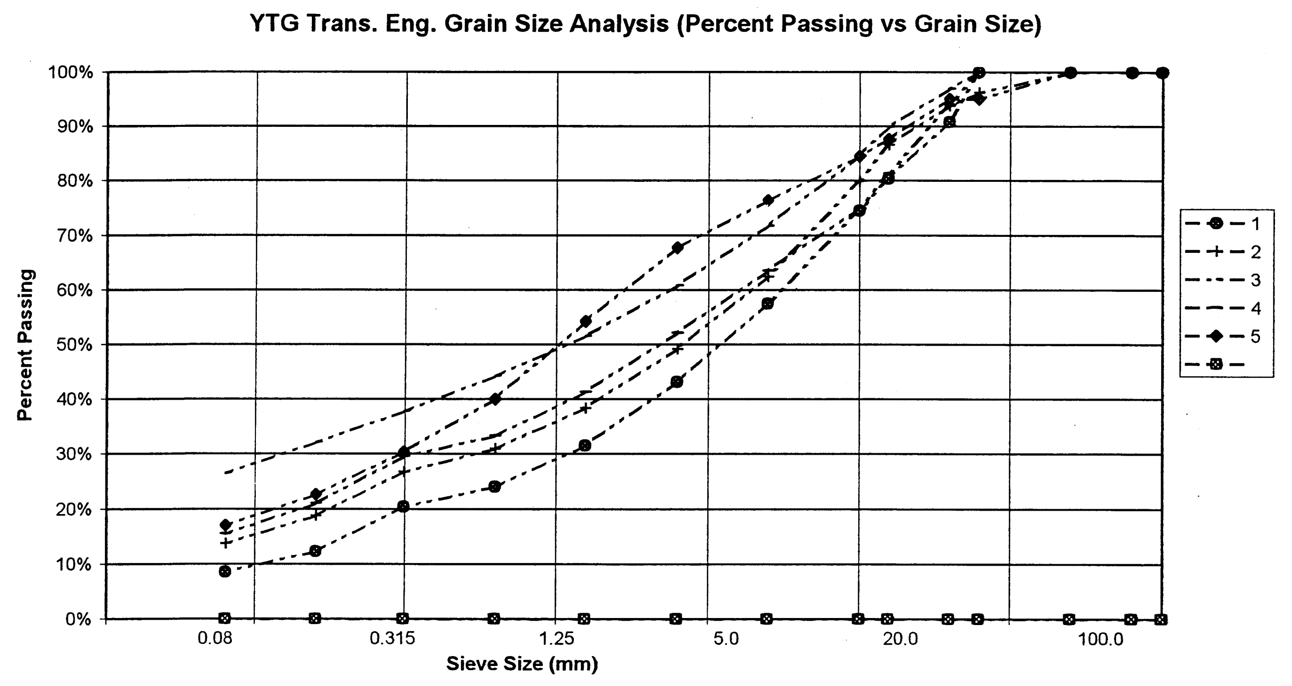
Backhoe Testing

1985	TEST PITS 108 to 112	shown with prefix 808-
1988	TEST PITS 1 to 21	shown with prefix 029-
1988	TEST PITS 22 to 39	shown with prefix 030-
2002	TEST PITS 1 to 25	shown with prefix 631-

CENTRELINE TESTING
1738+163 to 1750+300
ALASKA HIGHWAY

PROJECT NUMBER: 092-202101-0361-1
HOLE No.: 541-1292
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1742+925 10M LT
LOGGED BY: G.C.
DATE COMP: 2000/04/26

FIELD NO:	1	2	3	4	5	
LAB NO:	306	307	308	309	310	
DEPTH:	.6-1.0	1.2-1.4	2.0-2.2	2.8-3.0	4.4-4.7	
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	
100.0	100%	100%	100%	100%	100%	
80.0	100%	100%	100%	100%	100%	
50.0	100%	100%	100%	100%	100%	
25.0	100%	96%	100%	100%	95%	
20.0	91%	94%	97%	94%	95%	
12.5	80%	87%	90%	81%	88%	
10.0	75%	80%	85%	75%	84%	
5.0	58%	62%	72%	64%	76%	
2.5	43%	49%	61%	52%	68%	
1.25	32%	38%	52%	41%	54%	
0.630	24%	31%	44%	33%	40%	
0.315	20%	27%	38%	30%	30%	
0.160	12%	19%	32%	21%	23%	
0.080	9%	14%	27%	16%	17%	
M.C.(%):	6%	3%	6%	5%	5%	
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	
% GRAVEL:	42	38	28	36	24	
% SAND:	49	49	45	48	59	
% FINES:	9	14	27	16	17	
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	



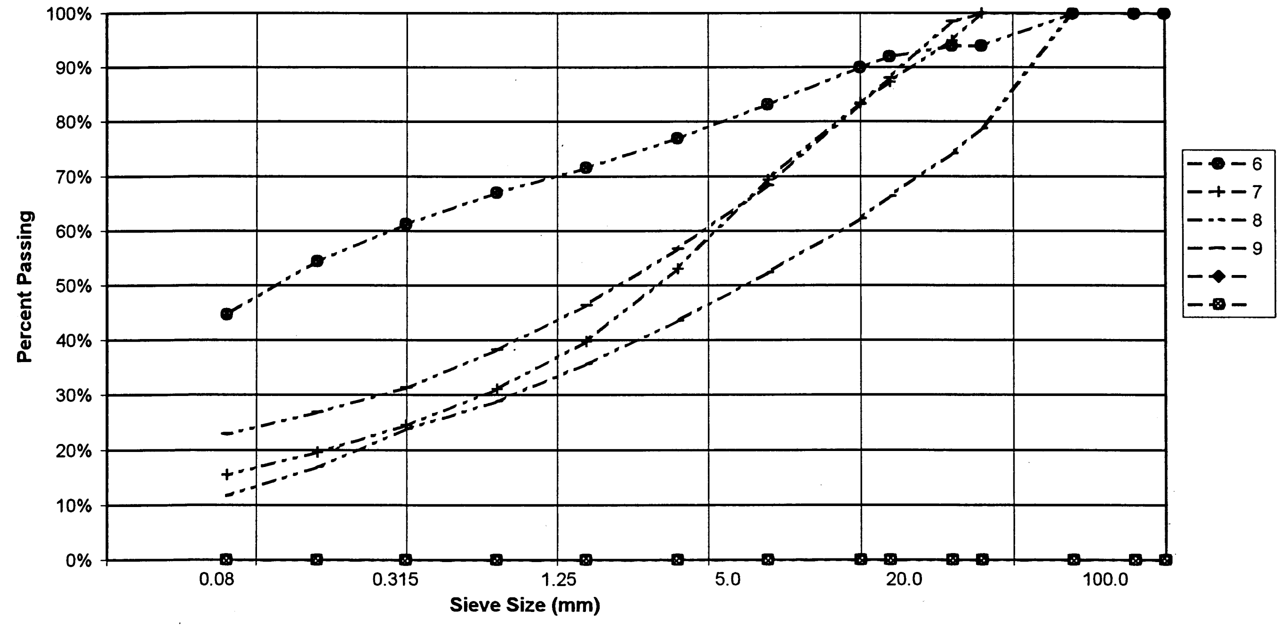
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1743+000 17M LT
LOGGED BY: G.C.

HOLE No.: 541-1293

DATE COMP: 2000/04/26

FIELD NO:	6	7	8	9		
LAB NO:	311	312	313	314		
DEPTH:	1.2-1.5	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	94%	100%	79%	100%		
20.0	94%	95%	74%	99%		
12.5	92%	87%	66%	88%		
10.0	90%	83%	62%	83%		
5.0	83%	69%	52%	68%		
2.5	77%	53%	44%	57%		
1.25	72%	40%	36%	46%		
0.630	67%	31%	29%	38%		
0.315	61%	24%	24%	31%		
0.160	54%	20%	17%	27%		
0.080	45%	15%	12%	23%		
M.C.(%):	16%	3%	3%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	17	31	48	32		
% SAND:	39	54	41	45		
% FINES:	45	15	12	23		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

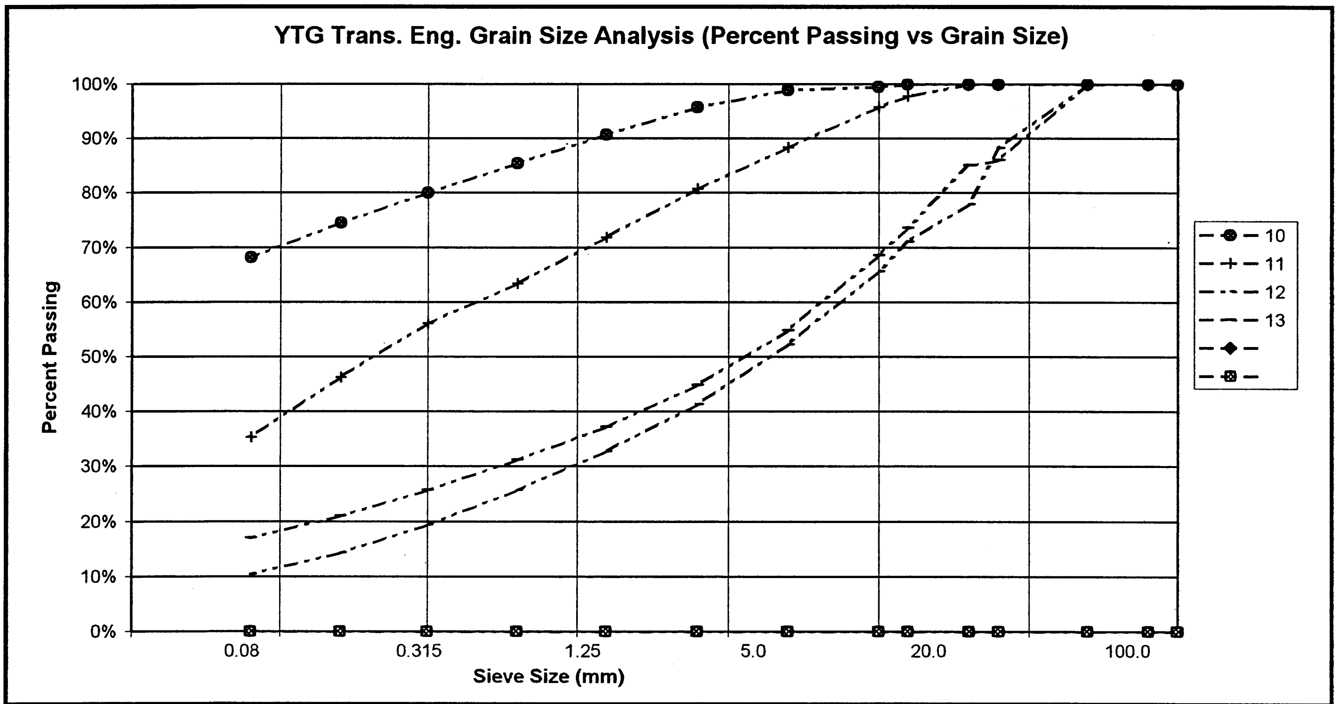


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1743+160 10M LT
LOGGED BY: G.C.

HOLE No.: 541-1294

DATE COMP: 2000/04/26

FIELD NO:	10	11	12	13		
LAB NO:	315	316	317	318		
DEPTH:	0.2-0.4	1.2-1.5	2.7-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	88%	86%		
20.0	100%	100%	78%	85%		
12.5	100%	98%	71%	74%		
10.0	99%	96%	66%	69%		
5.0	99%	88%	52%	55%		
2.5	96%	81%	41%	45%		
1.25	91%	72%	33%	37%		
0.630	85%	63%	26%	31%		
0.315	80%	56%	19%	26%		
0.160	75%	46%	14%	21%		
0.080	68%	35%	10%	17%		
M.C.(%):	20%	10%	2%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	1	12	48	45		
% SAND:	31	53	42	38		
% FINES:	68	35	10	17		
CLASSIFICATION	SANDY SILT (ML)	SILTY SAND (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY GRAVEL WITH SAND (GM)		

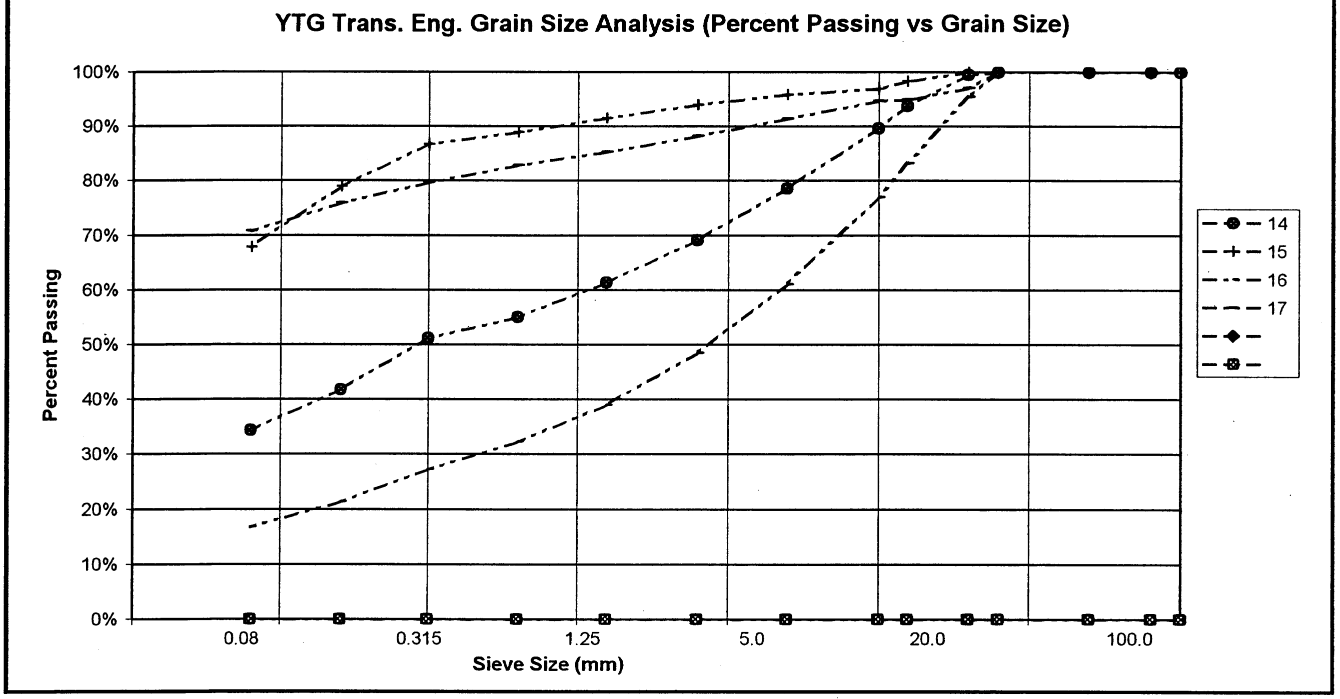

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1743+200 10M LT
LOGGED BY: G.C.

HOLE No.: 541-1295

DATE COMP: 2000/04/26

FIELD NO:	14	15	16	17		
LAB NO:	319	320	321	322		
DEPTH:	0.8-1.0	1.2-1.4	2.6-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	100%	95%	97%		
12.5	94%	98%	83%	95%		
10.0	90%	97%	77%	95%		
5.0	79%	96%	61%	91%		
2.5	69%	94%	48%	88%		
1.25	61%	92%	39%	85%		
0.630	55%	89%	32%	83%		
0.315	51%	87%	27%	80%		
0.160	42%	79%	21%	76%		
0.080	34%	68%	17%	71%		
M.C.(%):	21%	43%	7%	33%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	21	4	39	9		
% SAND:	44	28	44	21		
% FINES:	34	68	17	71		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILT WITH SAND (ML)		

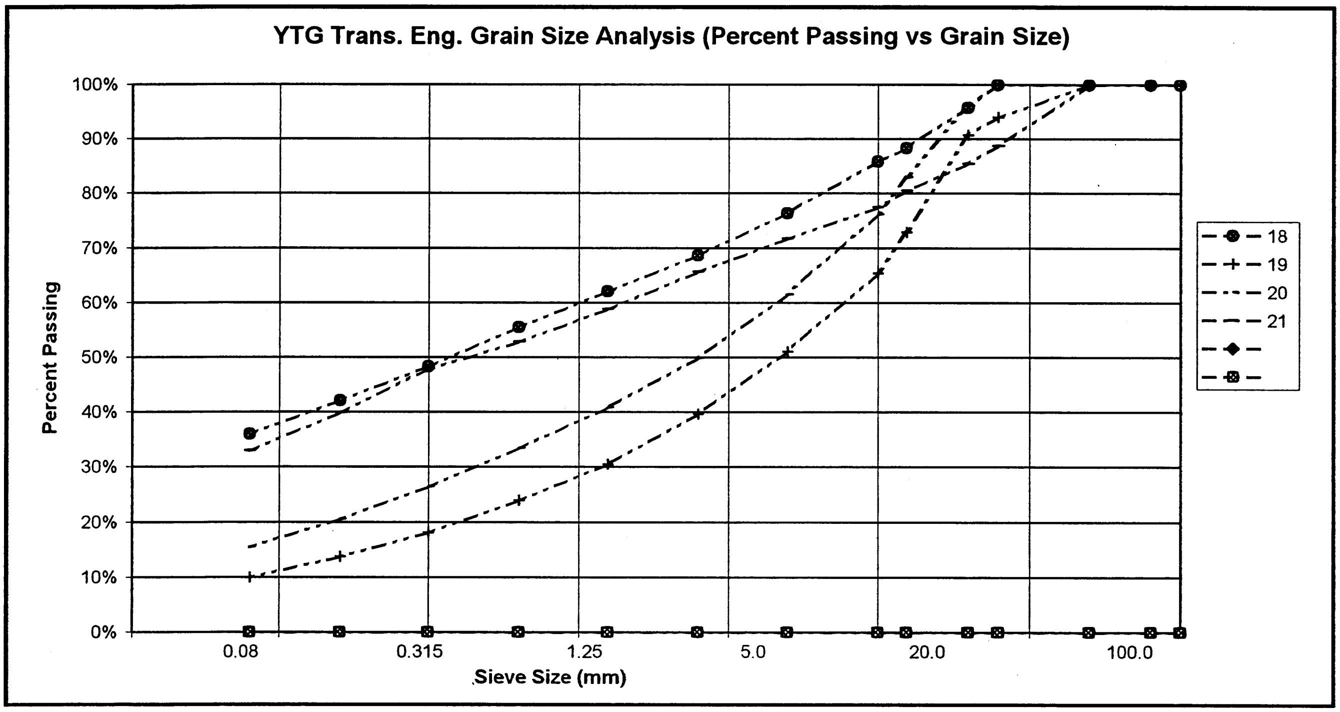

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1743+275 10M LT
LOGGED BY: G.C.

HOLE No.: 541-1296

DATE COMP: 2000/04/26

FIELD NO:	18	19	20	21		
LAB NO:	323	324	325	326		
DEPTH:	0.7-1.0	1.4-1.8	2.7-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	94%	100%	89%		
20.0	96%	91%	96%	85%		
12.5	88%	73%	83%	81%		
10.0	86%	65%	76%	77%		
5.0	76%	51%	62%	72%		
2.5	69%	40%	50%	66%		
1.25	62%	31%	41%	59%		
0.630	56%	24%	33%	53%		
0.315	48%	18%	26%	48%		
0.160	42%	14%	21%	40%		
0.080	36%	10%	16%	33%		
M.C.(%):	19%	3%	3%	7%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	24	49	38	28		
% SAND:	40	41	46	39		
% FINES:	36	10	16	33		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		

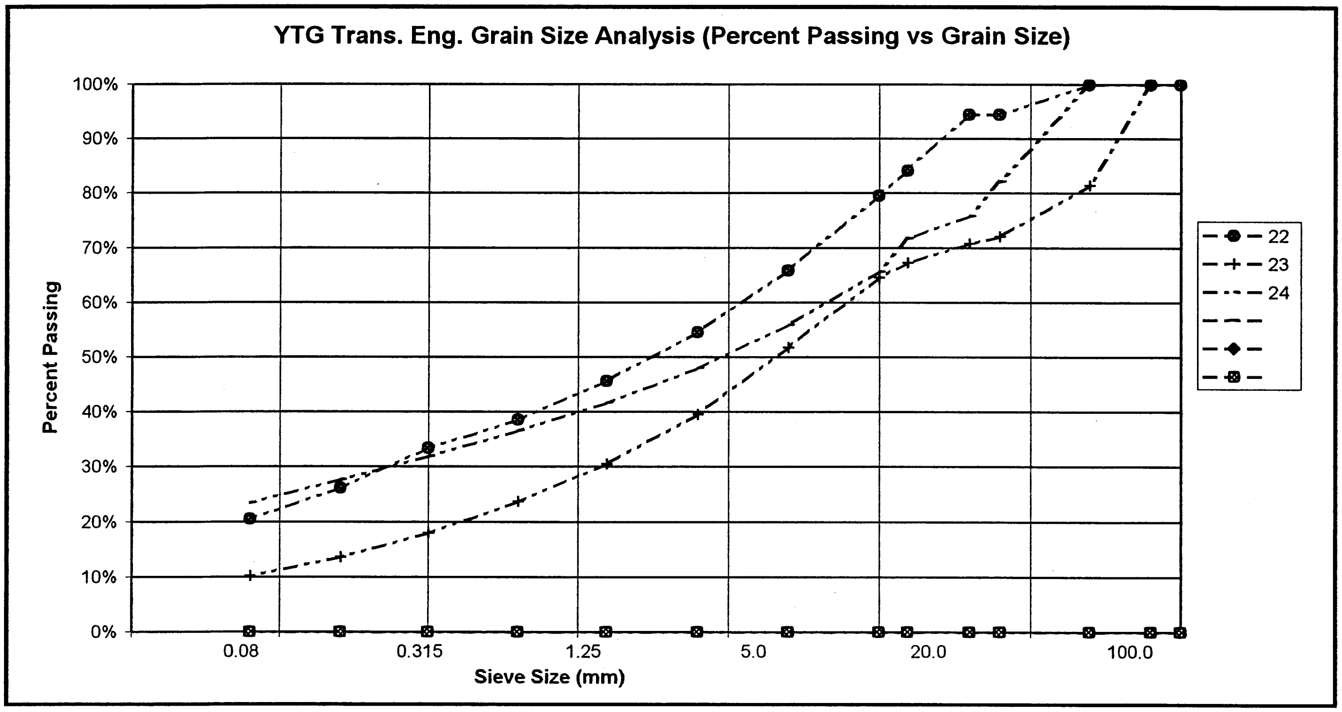


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1743+375 12M LT
LOGGED BY: G.C.

HOLE No.: 541-1297

DATE COMP: 2000/04/26

FIELD NO:	22	23	24			
LAB NO:	327	328	329			
DEPTH:	0.8-1.0	2.8-3.0	4.0-4.6			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	81%	100%			
25.0	95%	72%	82%			
20.0	95%	71%	76%			
12.5	84%	67%	72%			
10.0	80%	65%	66%			
5.0	66%	52%	56%			
2.5	55%	40%	48%			
1.25	46%	30%	42%			
0.630	39%	24%	37%			
0.315	33%	18%	32%			
0.160	26%	14%	28%			
0.080	21%	10%	23%			
M.C.(%):	5%	2%	6%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	34	48	44			
% SAND:	45	42	32			
% FINES:	21	10	23			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY GRAVEL WITH SAND (GM)			

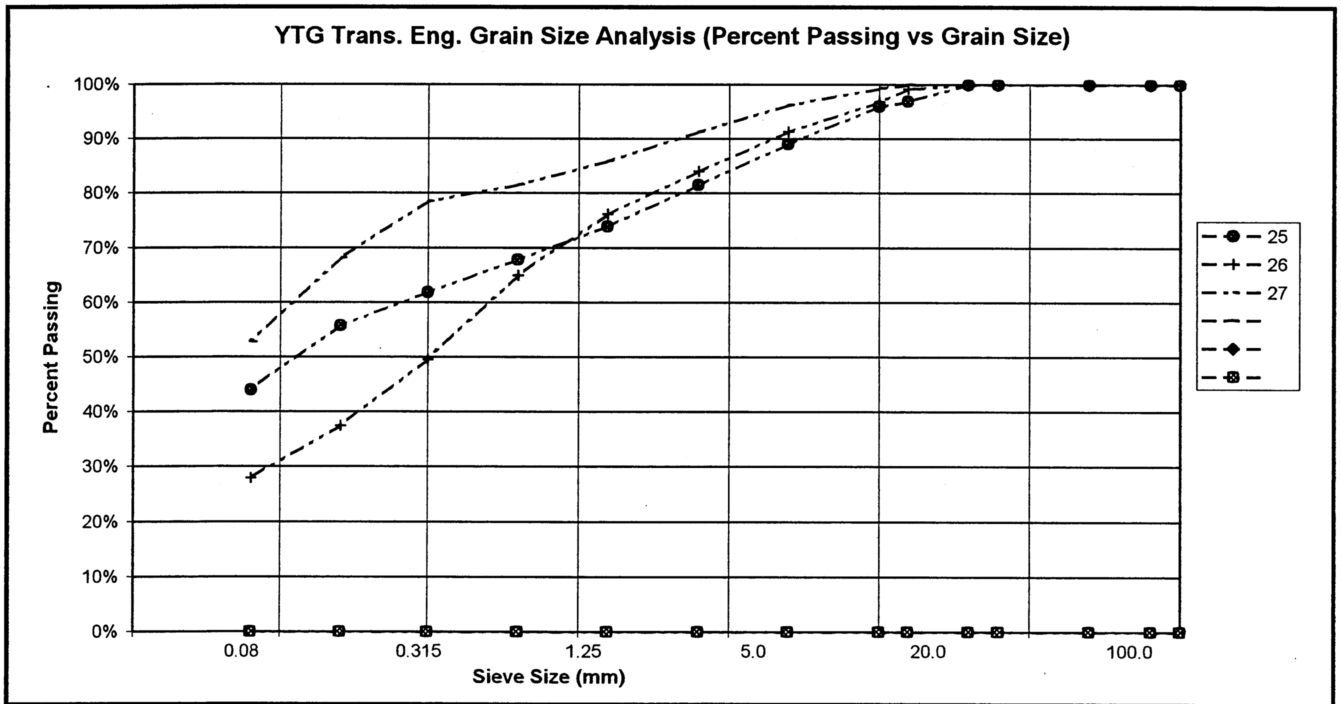


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1743+475 10M LT
LOGGED BY: G.C.

HOLE No.: 541-1298

DATE COMP: 2000/04/26

FIELD NO:	25	26	27			
LAB NO:	330	331	332			
DEPTH:	0.8-1.0	2.5-3.0	4.0-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	100%	100%	100%			
12.5	97%	99%	100%			
10.0	96%	97%	99%			
5.0	89%	91%	96%			
2.5	82%	84%	91%			
1.25	74%	76%	86%			
0.630	68%	65%	82%			
0.315	62%	50%	79%			
0.160	56%	37%	68%			
0.080	44%	28%	53%			
M.C.(%):	12%	11%	22%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	11	9	4			
% SAND:	45	63	44			
% FINES:	44	28	53			
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND (SM)	SANDY SILT (ML)			

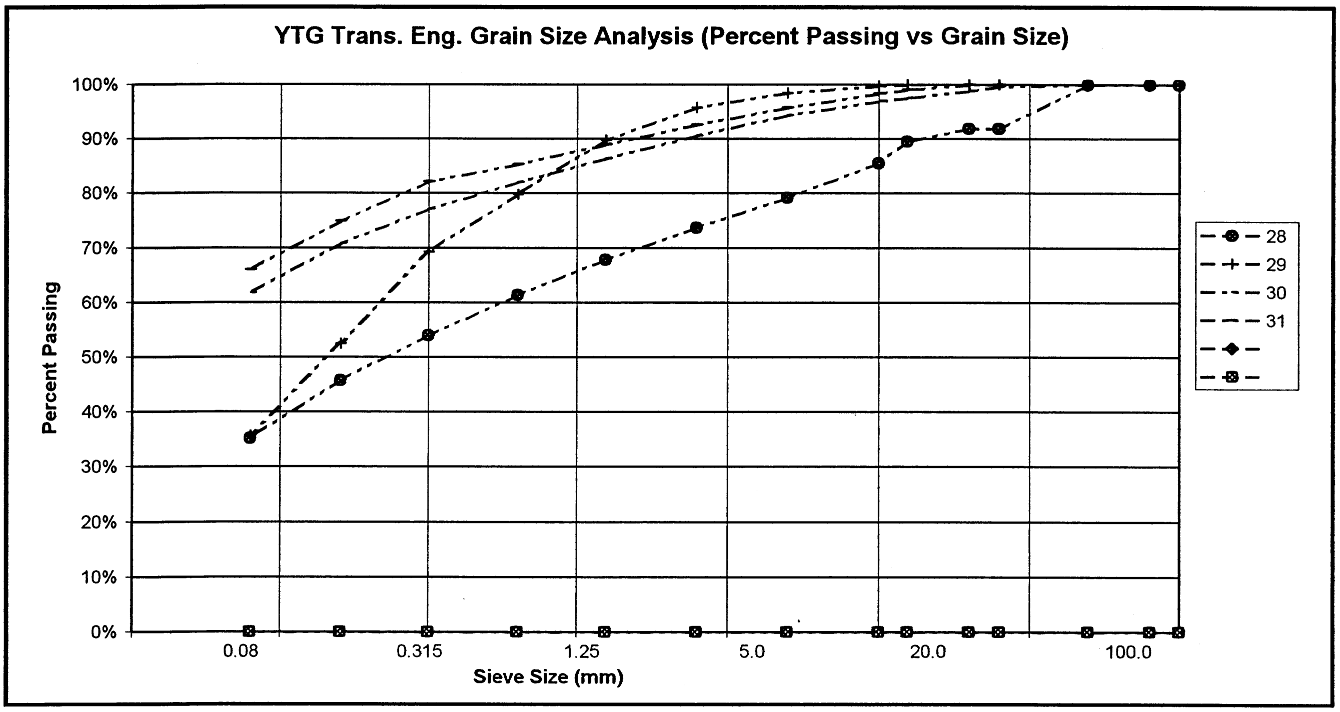


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1743+525 10M LT
LOGGED BY: G.C.

HOLE No.: 541-1299

DATE COMP: 2000/04/26

FIELD NO:	28	29	30	31		
LAB NO:	333	334	335	336		
DEPTH:	0.8-1.0	1.4-1.6	2.6-3.0	4.0-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	92%	100%	100%	100%		
20.0	92%	100%	99%	100%		
12.5	90%	100%	98%	99%		
10.0	86%	100%	97%	98%		
5.0	79%	98%	94%	96%		
2.5	74%	96%	91%	93%		
1.25	68%	90%	86%	89%		
0.630	61%	80%	82%	85%		
0.315	54%	69%	77%	82%		
0.160	46%	52%	71%	75%		
0.080	35%	36%	62%	66%		
M.C.(%):	14%	9%	53%	24%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	21	2	6	4		
% SAND:	44	63	33	30		
% FINES:	35	36	62	66		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)	SANDY SILT (ML)	SANDY SILT (ML)		

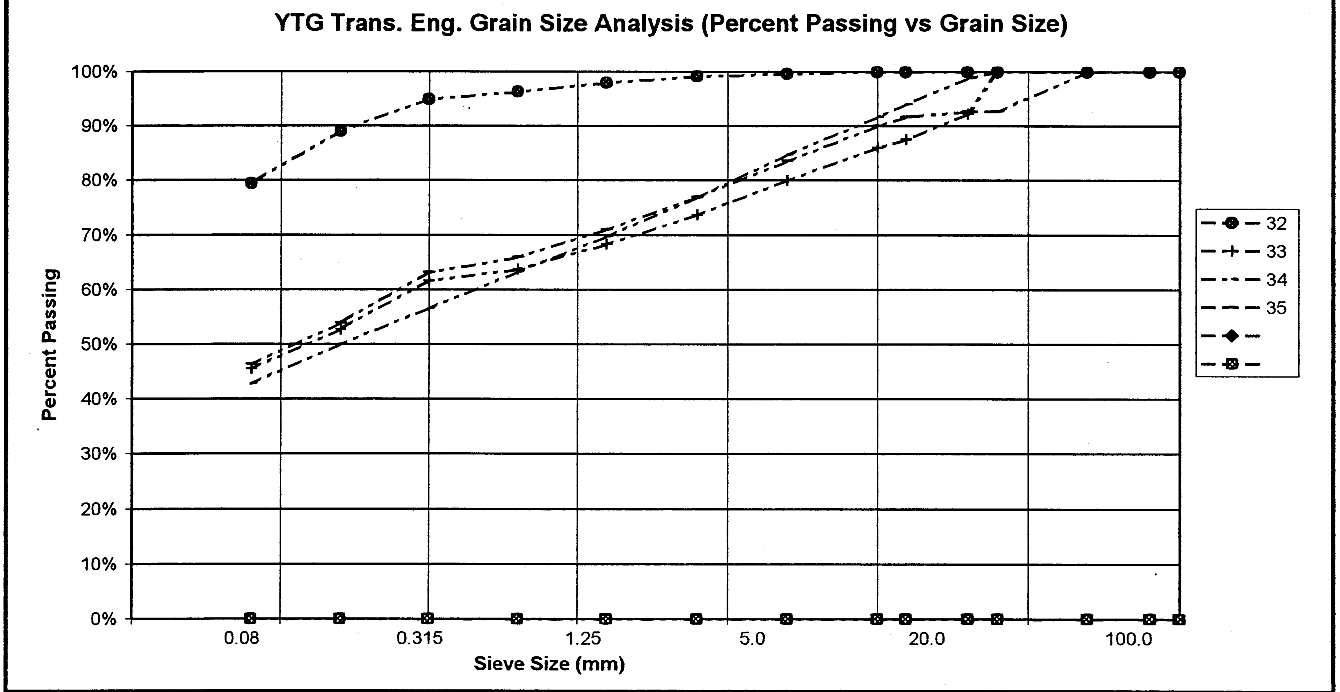


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1743+625 10M LT
LOGGED BY: G.C.

HOLE No.: 541-1300

DATE COMP: 2000/04/26

FIELD NO:	32	33	34	35		
LAB NO:	337	338	339	340		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.5-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	93%		
20.0	100%	92%	99%	93%		
12.5	100%	88%	94%	92%		
10.0	100%	86%	92%	90%		
5.0	100%	80%	85%	84%		
2.5	99%	74%	77%	77%		
1.25	98%	68%	70%	71%		
0.630	96%	64%	63%	66%		
0.315	95%	62%	57%	63%		
0.160	89%	53%	50%	54%		
0.080	79%	46%	43%	46%		
M.C.(%):	23%	11%	10%	11%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	20	15	16		
% SAND:	20	34	42	37		
% FINES:	79	46	43	46		
CLASSIFICATION	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		

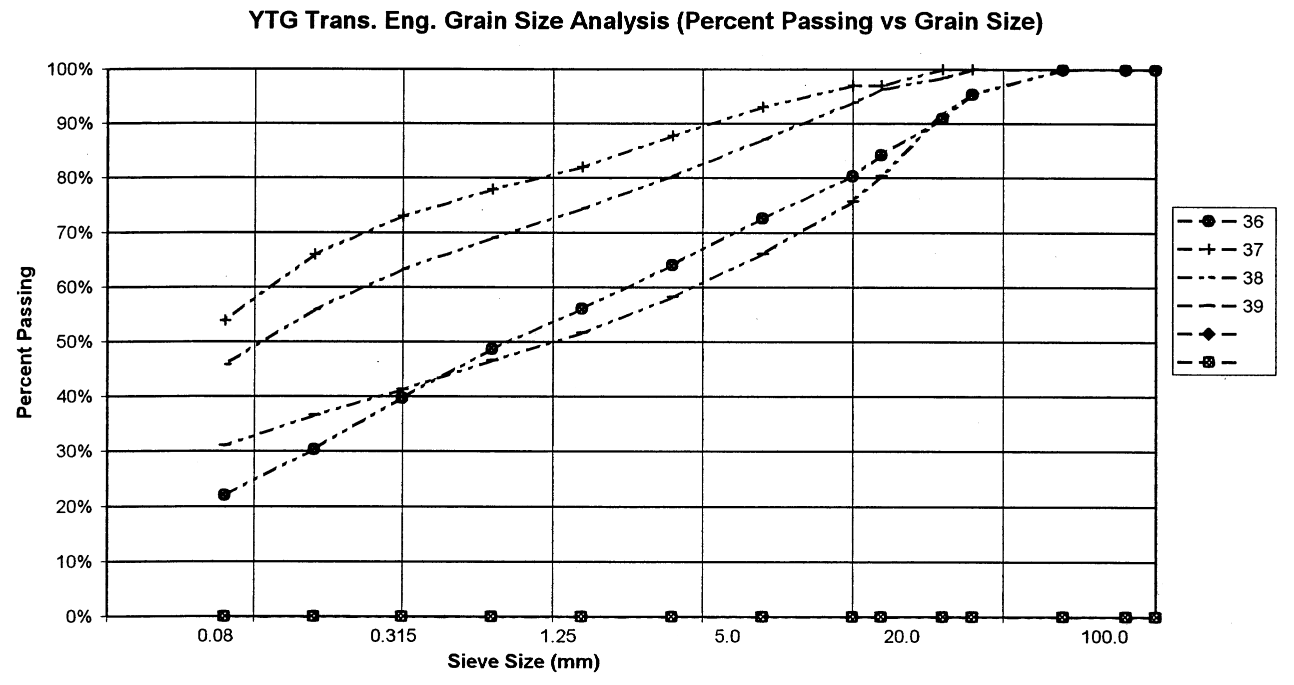


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1743+725 12M LT
LOGGED BY: G.C.

HOLE No.: 541-1301

DATE COMP: 2000/04/26

FIELD NO:	36	37	38	39		
LAB NO:	341	342	343	344		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.0-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	95%	100%	100%	95%		
20.0	91%	100%	98%	92%		
12.5	84%	97%	96%	80%		
10.0	80%	97%	94%	76%		
5.0	73%	93%	87%	66%		
2.5	64%	88%	80%	58%		
1.25	56%	82%	74%	52%		
0.630	49%	78%	69%	47%		
0.315	40%	73%	63%	41%		
0.160	30%	66%	56%	37%		
0.080	22%	54%	46%	31%		
M.C.(%):	7%	19%	23%	14%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	27	7	13	34		
% SAND:	51	39	41	35		
% FINES:	22	54	46	31		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SANDY SILT (ML)	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)		

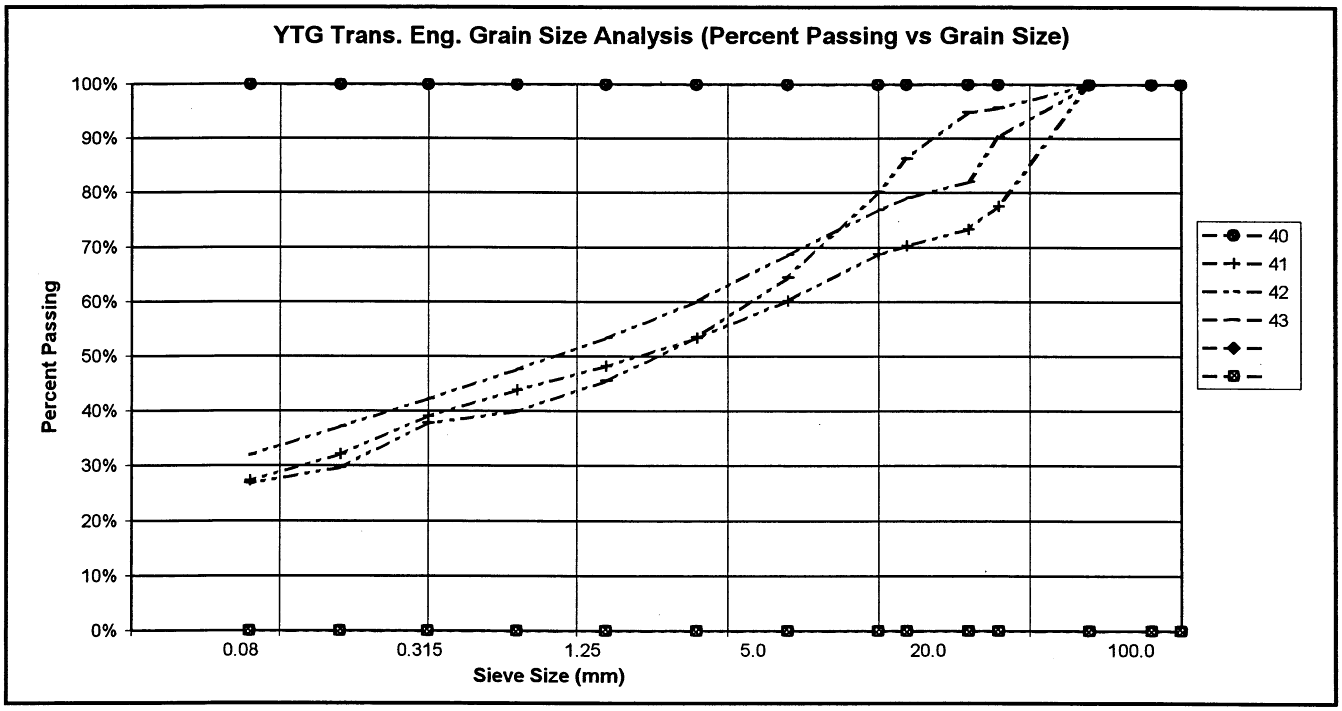


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1743+825 10M LT
LOGGED BY: G.C.

HOLE No.: 541-1302

DATE COMP: 2000/04/26

FIELD NO:	40	41	42	43		
LAB NO:	LOST	346	347	348		
DEPTH:	0.8-1.0	1.6-1.8	2.8-3.0	4.0-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	78%	90%	96%		
20.0	100%	73%	82%	95%		
12.5	100%	70%	79%	86%		
10.0	100%	69%	77%	80%		
5.0	100%	60%	69%	64%		
2.5	100%	53%	60%	54%		
1.25	100%	48%	53%	46%		
0.630	100%	44%	48%	40%		
0.315	100%	39%	42%	38%		
0.160	100%	32%	37%	30%		
0.080	100%	27%	32%	27%		
M.C.(%):	29%	19%	16%	15%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	40	31	36		
% SAND:	0	33	37	38		
% FINES:	100	27	32	27		
CLASSIFICATION	SILT (ML)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		

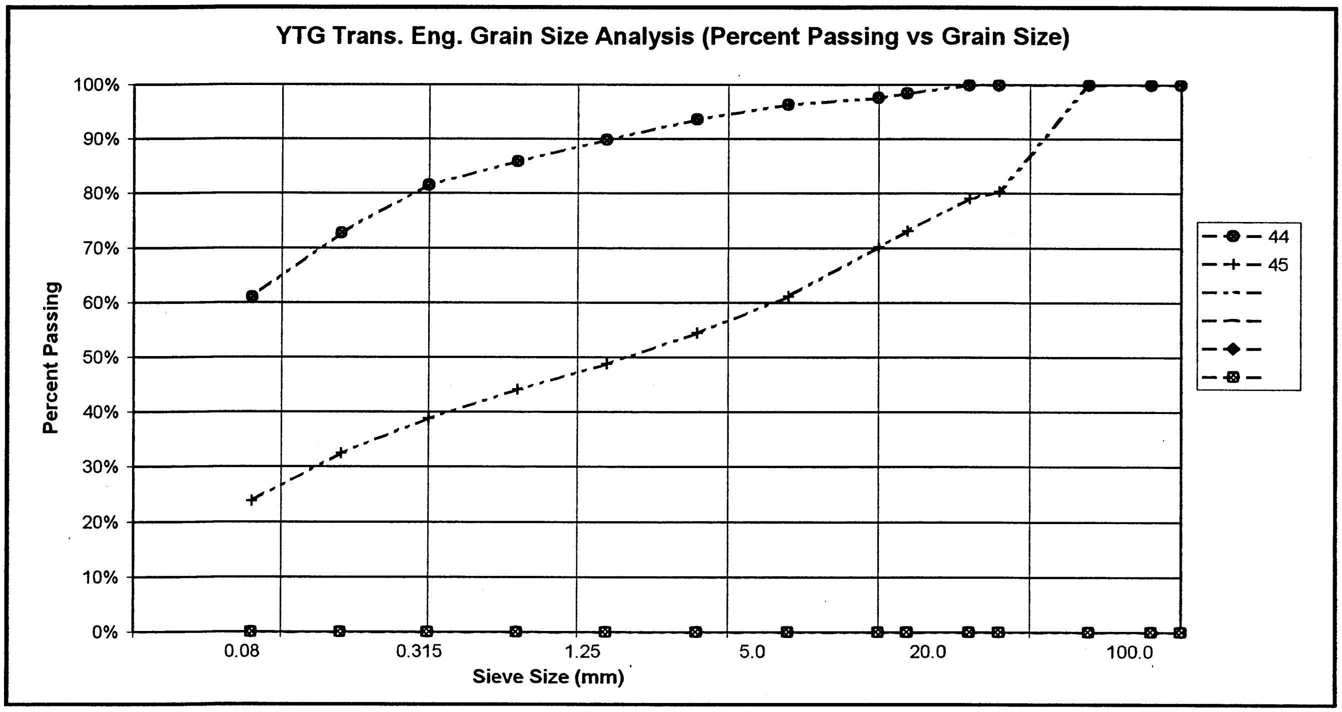

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1743+900 10M LT
LOGGED BY: G.C.

HOLE No.: 541-1303

DATE COMP: 2000/04/26

FIELD NO:	44	45				
LAB NO:	349	350				
DEPTH:	0.8-1.0	2.6-3.0				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	80%				
20.0	100%	79%				
12.5	98%	73%				
10.0	98%	70%				
5.0	96%	61%				
2.5	94%	54%				
1.25	90%	49%				
0.630	86%	44%				
0.315	82%	39%				
0.160	73%	32%				
0.080	61%	24%				
M.C.(%):	44%	13%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	4	39				
% SAND:	35	37				
% FINES:	61	24				
CLASSIFICATION	SANDY SILT (ML)	SILTY GRAVEL WITH SAND (GM)				

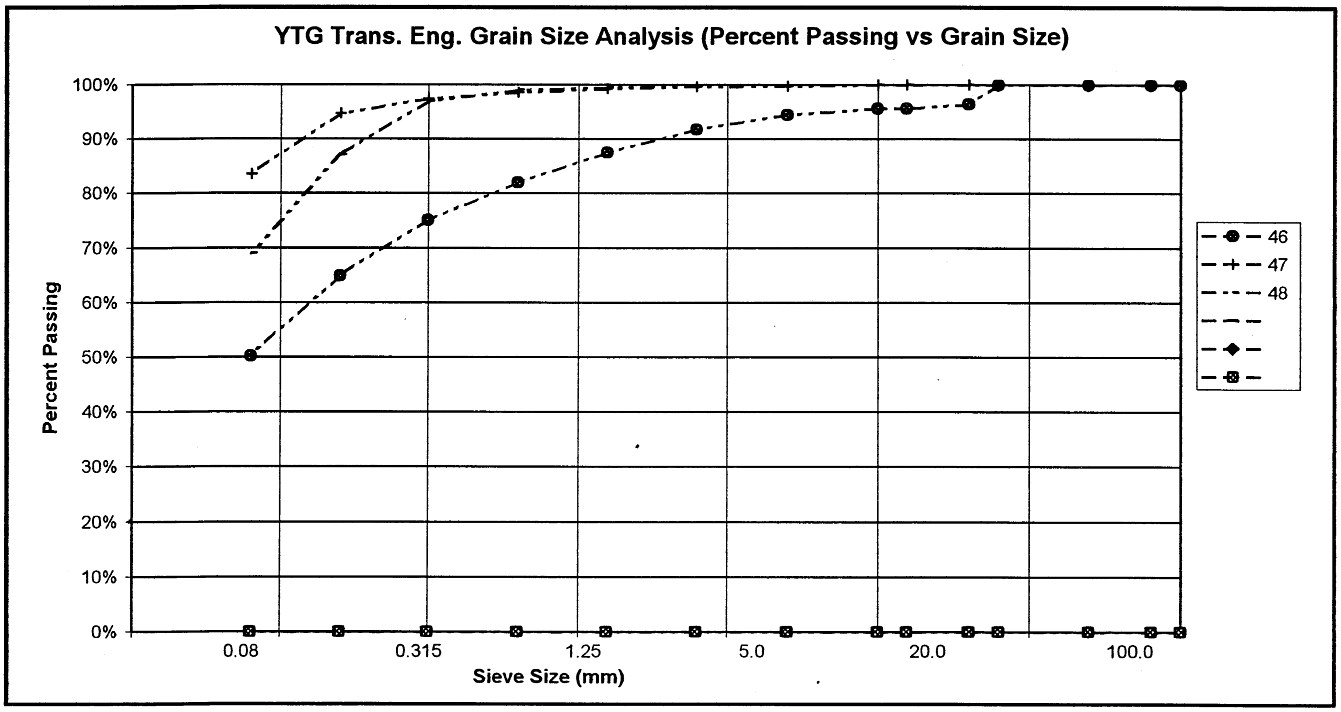


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1744+075 25M LT
LOGGED BY: G.C.

HOLE No.: 541-1304

DATE COMP: 2000/04/26

FIELD NO:	46	47	48			
LAB NO:	351	352	353			
DEPTH:	0.8-1.0	2.0-2.5	4.0-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	96%	100%	100%			
12.5	96%	100%	100%			
10.0	96%	100%	100%			
5.0	95%	100%	100%			
2.5	92%	100%	100%			
1.25	88%	99%	100%			
0.630	82%	99%	99%			
0.315	75%	97%	97%			
0.160	65%	95%	87%			
0.080	50%	84%	69%			
M.C.(%):	36%	23%	19%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	5	0	0			
% SAND:	44	16	31			
% FINES:	50	84	69			
CLASSIFICATION	SANDY SILT (ML)	SILT WITH SAND (ML)	SANDY SILT (ML)			

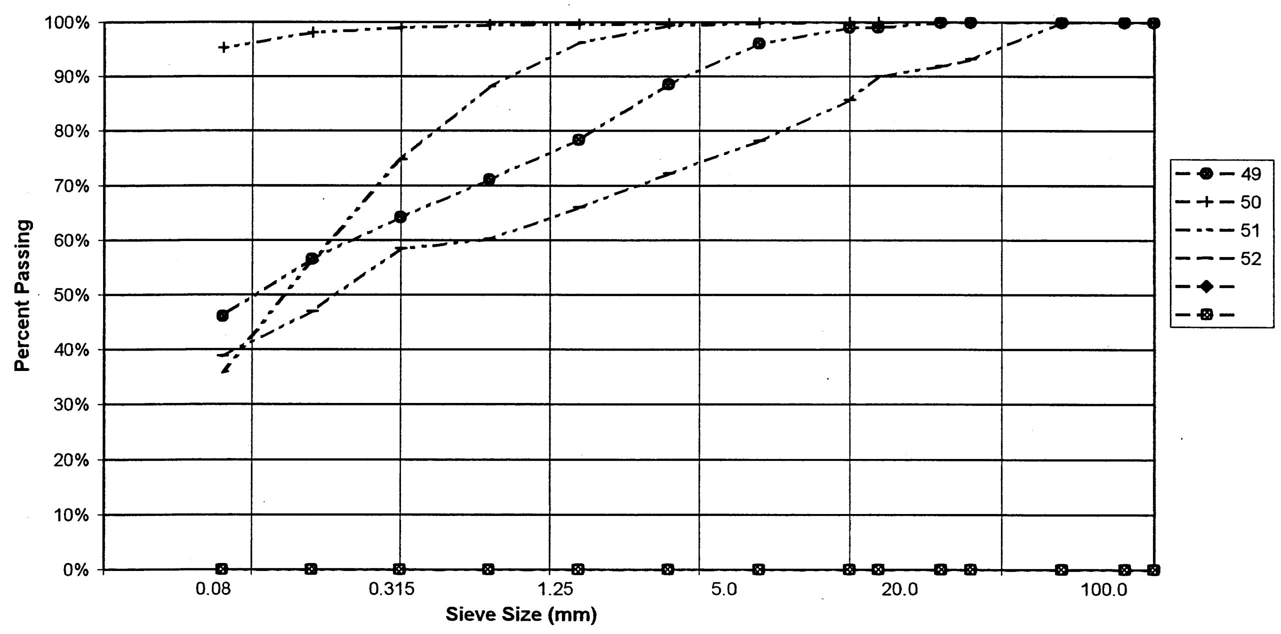


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1744+100 10M LT
LOGGED BY: G.C.

HOLE No.: 541-1305

DATE COMP: 2000/04/26

FIELD NO:	49	50	51	52		
LAB NO:	354	355	356	357		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.2-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	93%		
20.0	100%	100%	100%	92%		
12.5	99%	100%	100%	90%		
10.0	99%	100%	100%	86%		
5.0	96%	100%	100%	78%		
2.5	89%	100%	99%	72%		
1.25	78%	100%	96%	66%		
0.630	71%	99%	88%	60%		
0.315	64%	99%	75%	58%		
0.160	57%	98%	56%	47%		
0.080	46%	95%	36%	39%		
M.C.(%):	21%	25%	18%	11%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	4	0	0	22		
% SAND:	50	5	64	39		
% FINES:	46	95	36	39		
CLASSIFICATION	SILTY SAND (SM)	SILT (ML)	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)		



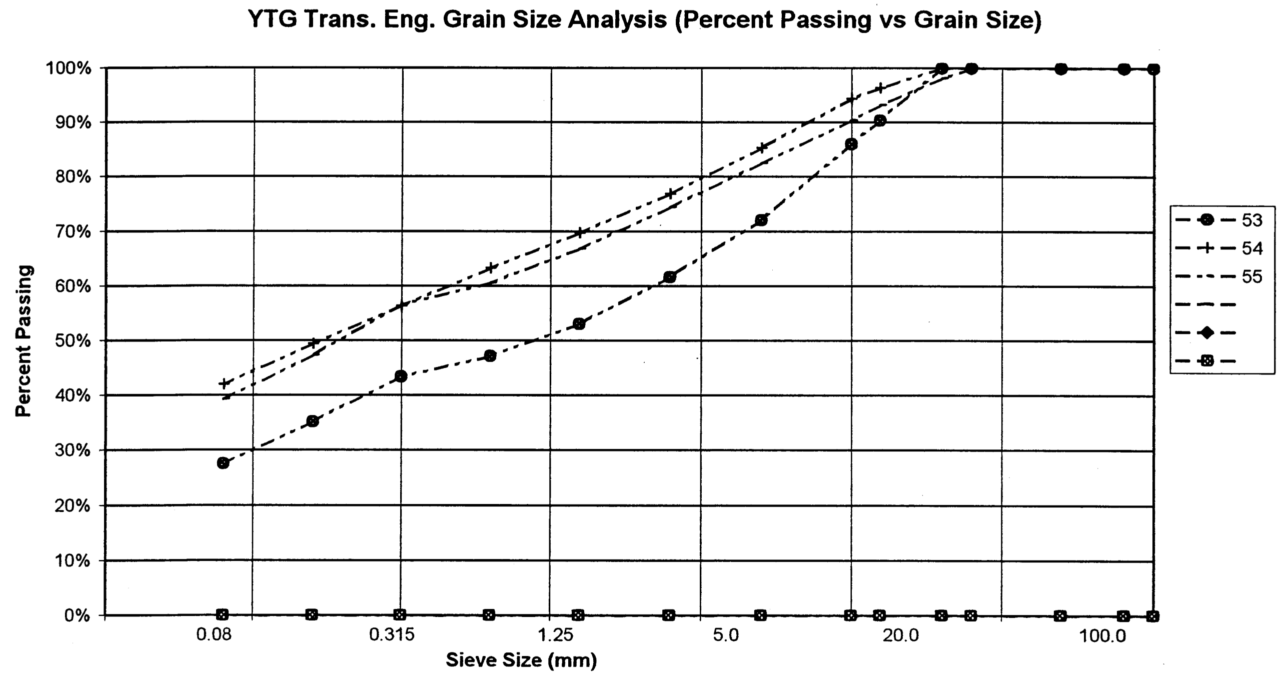
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1744+150 15M LT
LOGGED BY: G.C.

HOLE No.: 541-1306

DATE COMP: 2000/04/27

FIELD NO:	53	54	55			
LAB NO:	358	359	360			
DEPTH:	1.3-1.5	2.5-3.0	4.4-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	100%	100%	98%			
12.5	90%	96%	93%			
10.0	86%	94%	90%			
5.0	72%	85%	83%			
2.5	62%	77%	74%			
1.25	53%	70%	67%			
0.630	47%	63%	61%			
0.315	43%	56%	57%			
0.160	35%	49%	47%			
0.080	28%	42%	39%			
M.C.(%):	19%	12%	10%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	28	15	17			
% SAND:	44	43	43			
% FINES:	28	42	39			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)			



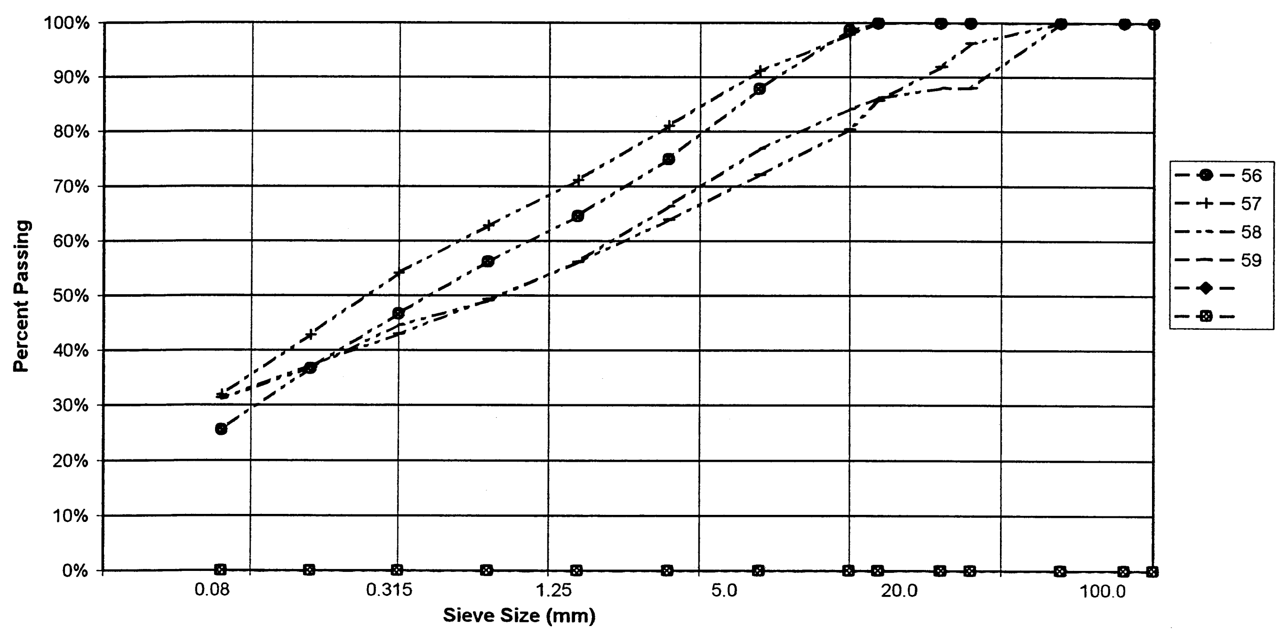
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1744+200 12M LT
LOGGED BY: G.C.

HOLE No.: 541-1307

DATE COMP: 2000/04/27

FIELD NO:	56	57	58	59		
LAB NO:	361	362	363	364		
DEPTH:	0.8-1.0	1.6-2.0	2.8-3.0	4.5-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	88%	96%		
20.0	100%	100%	88%	92%		
12.5	100%	100%	86%	86%		
10.0	99%	98%	84%	80%		
5.0	88%	91%	77%	72%		
2.5	75%	81%	66%	64%		
1.25	65%	71%	56%	56%		
0.630	56%	63%	49%	49%		
0.315	47%	54%	45%	43%		
0.160	37%	43%	37%	37%		
0.080	26%	32%	31%	31%		
M.C.(%):	5%	9%	12%	9%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	12	9	23	28		
% SAND:	62	59	46	41		
% FINES:	26	32	31	31		
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



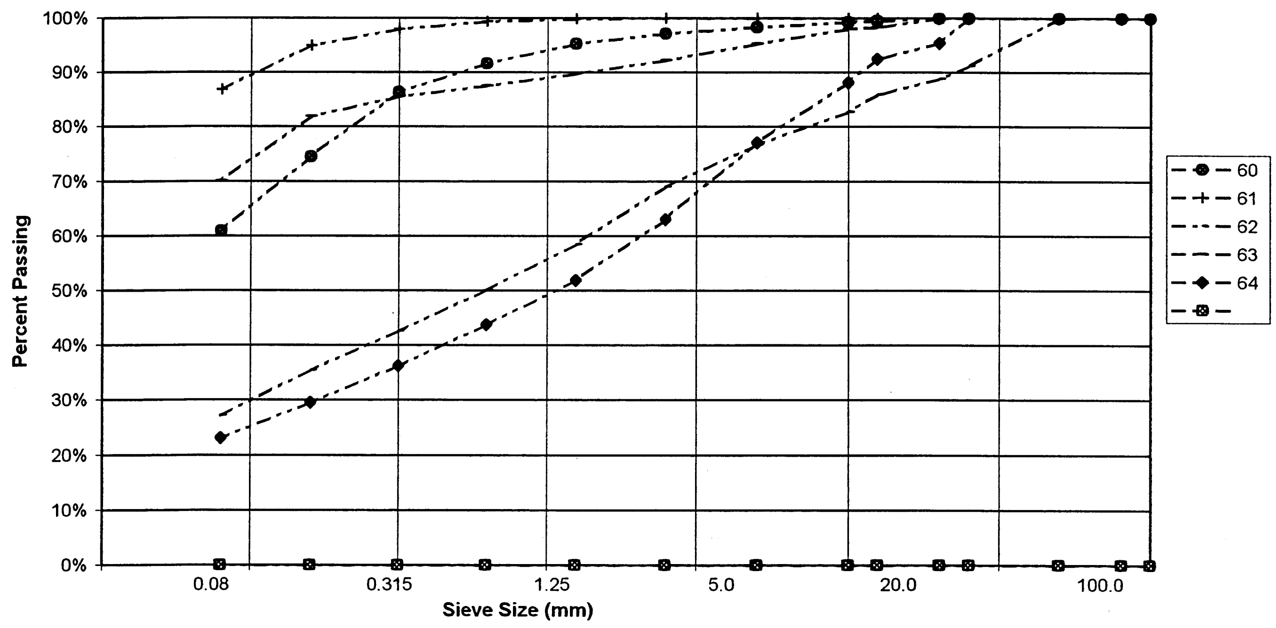
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1744+300 12M LT
LOGGED BY: G.C.

HOLE No.: 541-1308

DATE COMP: 2000/04/27

FIELD NO:	60	61	62	63	64	
LAB NO:	365	366	367	368	369	
DEPTH:	1.0-1.5	1.8-2.0	2.8-3.0	3.8-4.0	5.4-5.8	
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	
100.0	100%	100%	100%	100%	100%	
80.0	100%	100%	100%	100%	100%	
50.0	100%	100%	100%	100%	100%	
25.0	100%	100%	91%	100%	100%	
20.0	100%	100%	89%	100%	95%	
12.5	100%	100%	86%	98%	92%	
10.0	99%	100%	83%	98%	88%	
5.0	98%	100%	77%	95%	77%	
2.5	97%	100%	69%	92%	63%	
1.25	95%	100%	58%	90%	52%	
0.630	92%	99%	50%	88%	44%	
0.315	86%	98%	43%	86%	36%	
0.160	74%	95%	35%	82%	30%	
0.080	61%	87%	27%	70%	23%	
M.C.(%):	25%	53%	16%	30%	12%	
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	
% GRAVEL:	2	0	23	5	23	
% SAND:	37	13	50	25	54	
% FINES:	61	87	27	70	23	
CLASSIFICATION	SANDY SILT (ML)	SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

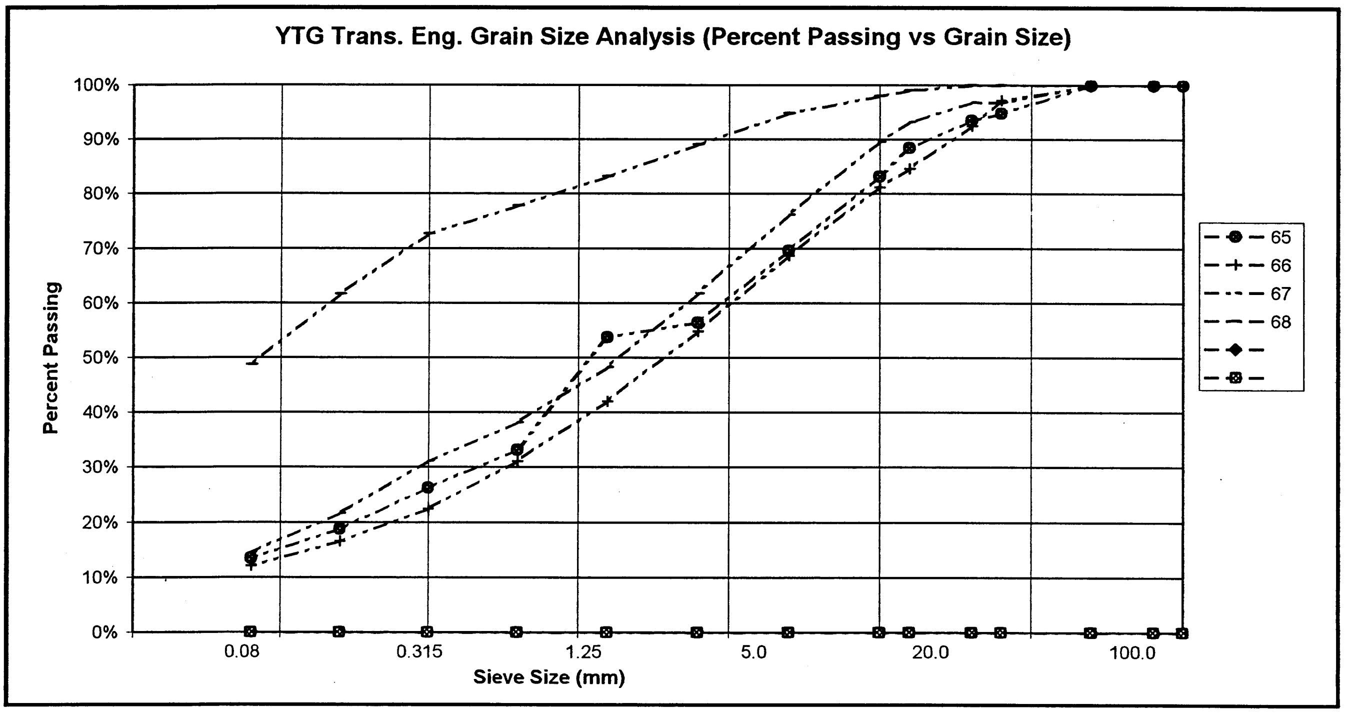


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1744+375 15M LT
LOGGED BY: G.C.

HOLE No.: 541-1309

DATE COMP: 2000/04/27

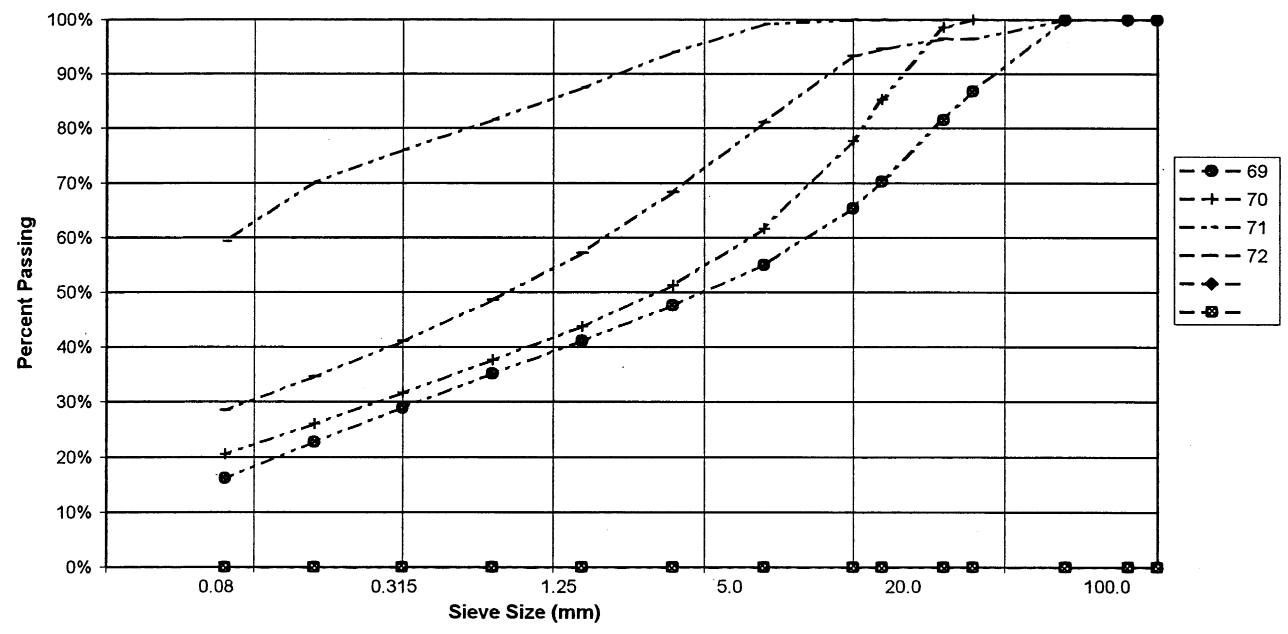
FIELD NO:	65	66	67	68		
LAB NO:	370	371	372	373		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.2-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	95%	97%	97%	100%		
20.0	93%	92%	97%	100%		
12.5	88%	85%	93%	99%		
10.0	83%	81%	90%	98%		
5.0	70%	69%	76%	95%		
2.5	56%	55%	62%	89%		
1.25	54%	42%	48%	83%		
0.630	33%	31%	38%	78%		
0.315	26%	22%	31%	73%		
0.160	19%	17%	22%	62%		
0.080	13%	12%	15%	49%		
M.C.(%):	3%	4%	10%	25%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	30	31	24	5		
% SAND:	56	57	62	46		
% FINES:	13	12	15	49		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)		



PROJECT NUMBER: 092-202101-0361-1
HOLE No.: 541-1310
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1744+500 12M LT
LOGGED BY: G.C.
DATE COMP: 2000/04/27

FIELD NO:	69	70	71	72		
LAB NO:	374	375	376	377		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.0-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	87%	100%	100%	96%		
20.0	82%	99%	100%	96%		
12.5	70%	85%	100%	95%		
10.0	65%	78%	100%	93%		
5.0	55%	62%	99%	81%		
2.5	48%	51%	94%	68%		
1.25	41%	44%	87%	57%		
0.630	35%	38%	82%	49%		
0.315	29%	32%	76%	41%		
0.160	23%	26%	70%	35%		
0.080	16%	21%	59%	28%		
M.C.(%):	3%	7%	27%	14%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	45	38	1	19		
% SAND:	39	41	40	53		
% FINES:	16	21	59	28		
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



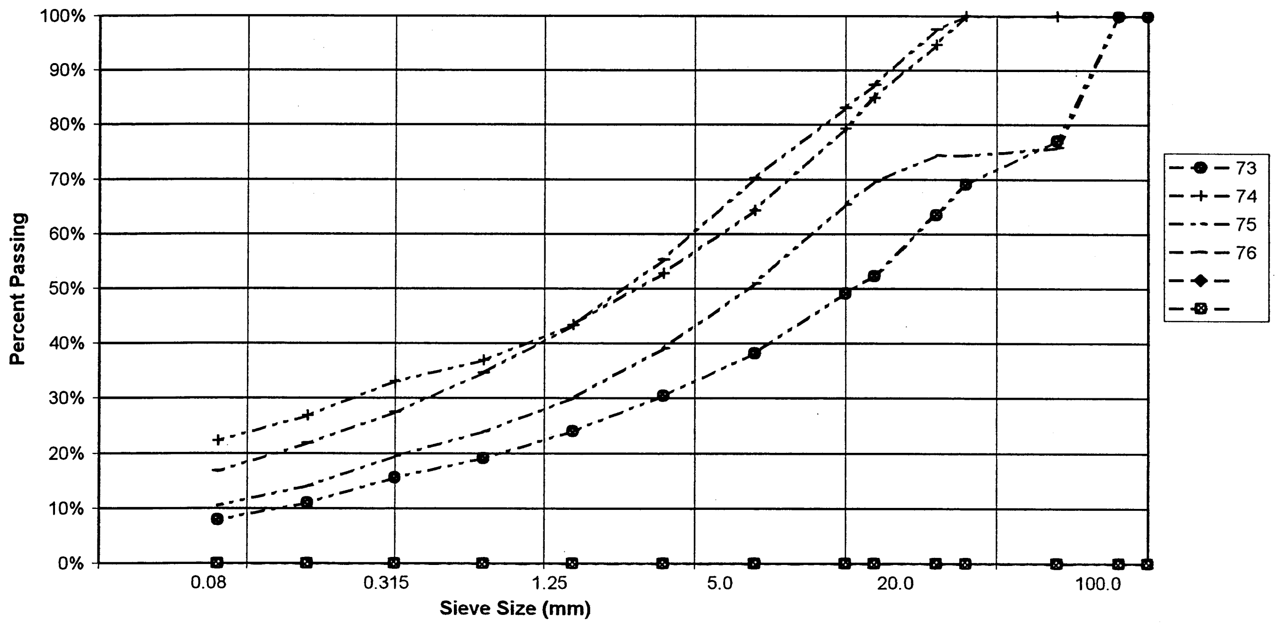
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1744+565 15M LT
LOGGED BY: G.C.

HOLE No.: 541-1311

DATE COMP: 2000/04/27

FIELD NO:	73	74	75	76		
LAB NO:	378	379	380	381		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	77%	100%	76%	100%		
25.0	69%	100%	74%	100%		
20.0	63%	95%	74%	97%		
12.5	52%	85%	70%	87%		
10.0	49%	79%	65%	83%		
5.0	38%	64%	51%	70%		
2.5	31%	53%	39%	55%		
1.25	24%	43%	30%	43%		
0.630	19%	37%	24%	35%		
0.315	16%	33%	19%	27%		
0.160	11%	27%	14%	22%		
0.080	8%	22%	11%	17%		
M.C.(%):	4%	12%	9%	11%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	62	36	49	30		
% SAND:	30	42	40	54		
% FINES:	8	22	11	17		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

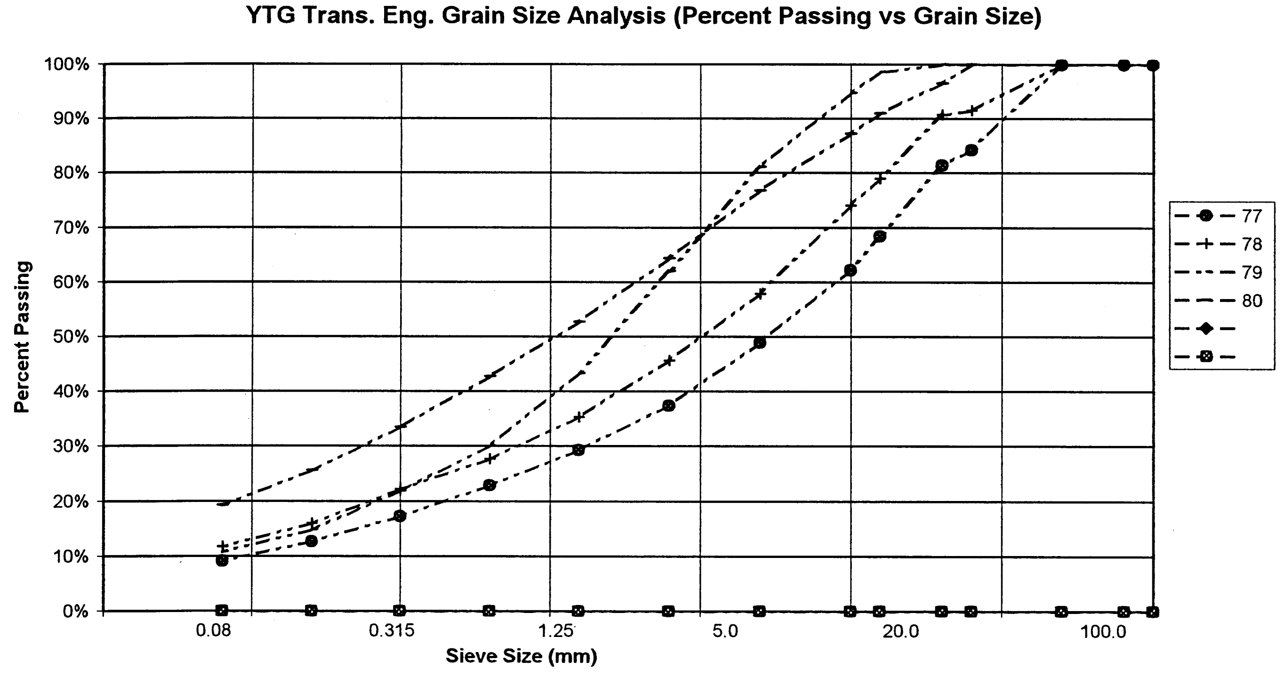


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1744+675 15M LT
LOGGED BY: G.C.

HOLE No.: 541-1312

DATE COMP: 2000/04/27

FIELD NO:	77	78	79	80		
LAB NO:	382	383	384	385		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	84%	92%	100%	100%		
20.0	81%	91%	100%	96%		
12.5	68%	79%	99%	91%		
10.0	62%	74%	95%	87%		
5.0	49%	58%	81%	77%		
2.5	37%	46%	62%	64%		
1.25	29%	35%	43%	53%		
0.630	23%	28%	30%	43%		
0.315	17%	22%	22%	33%		
0.160	13%	16%	15%	26%		
0.080	9%	12%	11%	19%		
M.C.(%):	2%	2%	12%	12%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	51	42	19	23		
% SAND:	40	46	70	58		
% FINES:	9	12	11	19		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND WITH GRAVEL (SM)		


YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

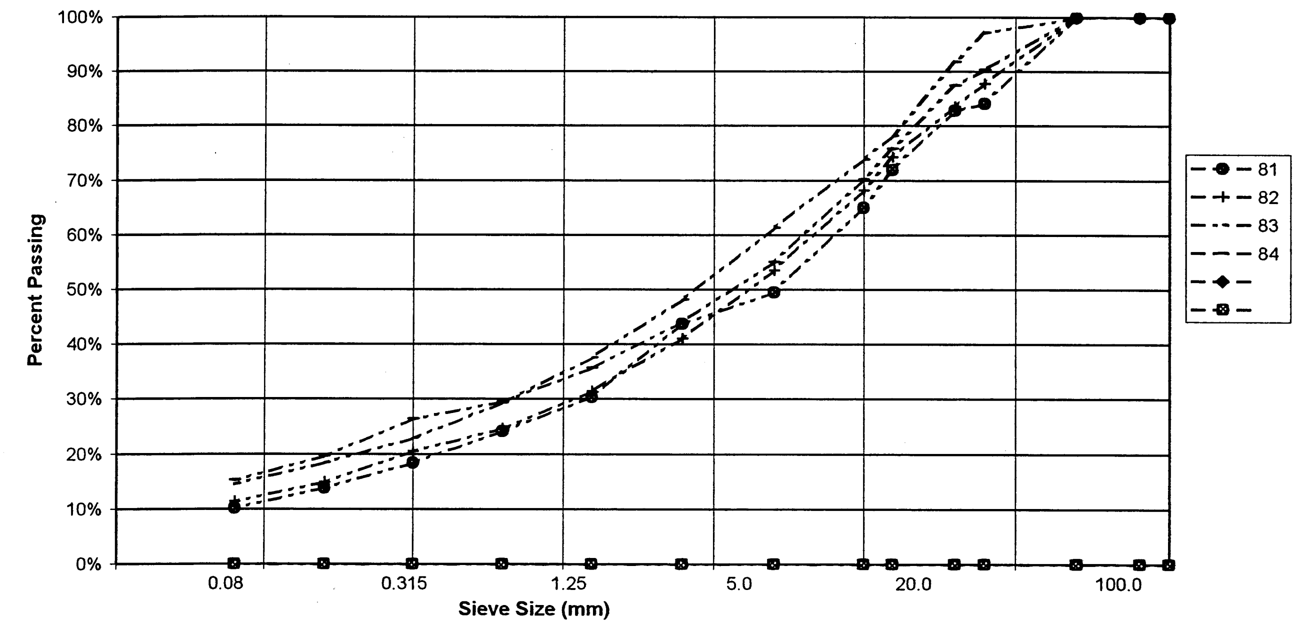
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1744+725 15M LT
LOGGED BY: G.C.

HOLE No.: 541-1313

DATE COMP: 2000/04/27

FIELD NO:	81	82	83	84		
LAB NO:	386	387	388	389		
DEPTH:	0.8-1.0	1.8-2.0	2.6-2.8	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	84%	88%	97%	90%		
20.0	83%	84%	92%	87%		
12.5	72%	74%	78%	76%		
10.0	65%	68%	74%	70%		
5.0	49%	53%	61%	55%		
2.5	44%	41%	48%	44%		
1.25	30%	31%	38%	36%		
0.630	24%	25%	29%	30%		
0.315	18%	21%	23%	26%		
0.160	14%	15%	18%	20%		
0.080	10%	11%	15%	15%		
M.C.(%):	2%	2%	2%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	51	47	39	45		
% SAND:	39	42	47	40		
% FINES:	10	11	15	15		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



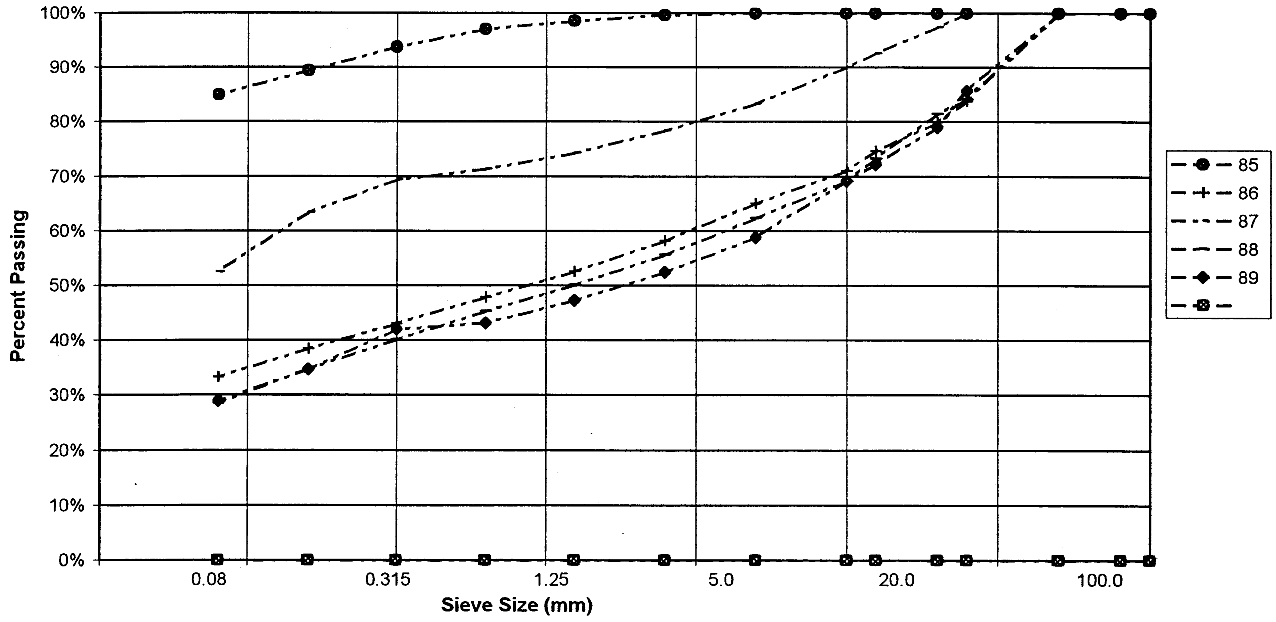
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1744+950 20M LT
LOGGED BY: G.C.

HOLE No.: 541-1314

DATE COMP: 2000/04/27

FIELD NO:	85	86	87	88	89	
LAB NO:	390	391	392	393	394	
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	3.8-4.0	4.8-5.0	
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	
100.0	100%	100%	100%	100%	100%	
80.0	100%	100%	100%	100%	100%	
50.0	100%	100%	100%	100%	100%	
25.0	100%	84%	100%	84%	86%	
20.0	100%	80%	97%	81%	79%	
12.5	100%	75%	93%	73%	72%	
10.0	100%	71%	90%	69%	69%	
5.0	100%	65%	83%	62%	59%	
2.5	100%	58%	78%	56%	53%	
1.25	99%	53%	74%	50%	47%	
0.630	97%	48%	71%	45%	43%	
0.315	94%	43%	69%	40%	42%	
0.160	89%	38%	63%	35%	35%	
0.080	85%	33%	52%	28%	29%	
M.C.(%):	97%	19%	19%	10%	10%	
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	
% GRAVEL:	0	35	17	38	41	
% SAND:	15	32	31	34	30	
% FINES:	85	33	52	28	29	
CLASSIFICATION	SILT (ML)	SILTY GRAVEL WITH SAND (GM)	SANDY SILT WITH GRAVEL (ML)	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)	

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

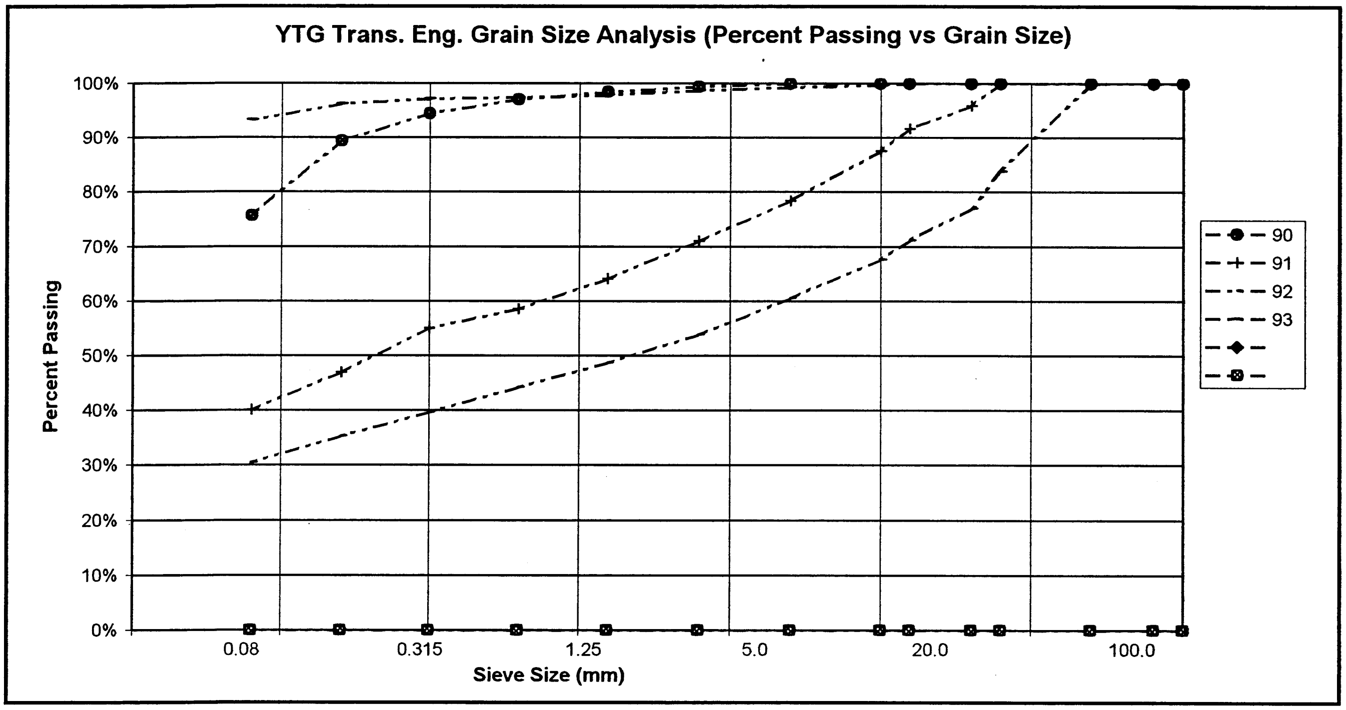


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1745+025 12M LT
LOGGED BY: G.C.

HOLE No.: 541-1315

DATE COMP: 2000/04/27

FIELD NO:	90	91	92	93		
LAB NO:	395	396	397	398		
DEPTH:	1.0-1.3	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	84%	100%		
20.0	100%	96%	77%	100%		
12.5	100%	92%	71%	100%		
10.0	100%	88%	68%	100%		
5.0	100%	78%	61%	99%		
2.5	99%	71%	54%	99%		
1.25	98%	64%	49%	98%		
0.630	97%	59%	44%	97%		
0.315	94%	55%	40%	97%		
0.160	89%	47%	35%	96%		
0.080	76%	40%	31%	93%		
M.C.(%):	13%	12%	11%	22%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	22	39	1		
% SAND:	24	38	30	6		
% FINES:	76	40	31	93		
CLASSIFICATION	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)	SILT (ML)		

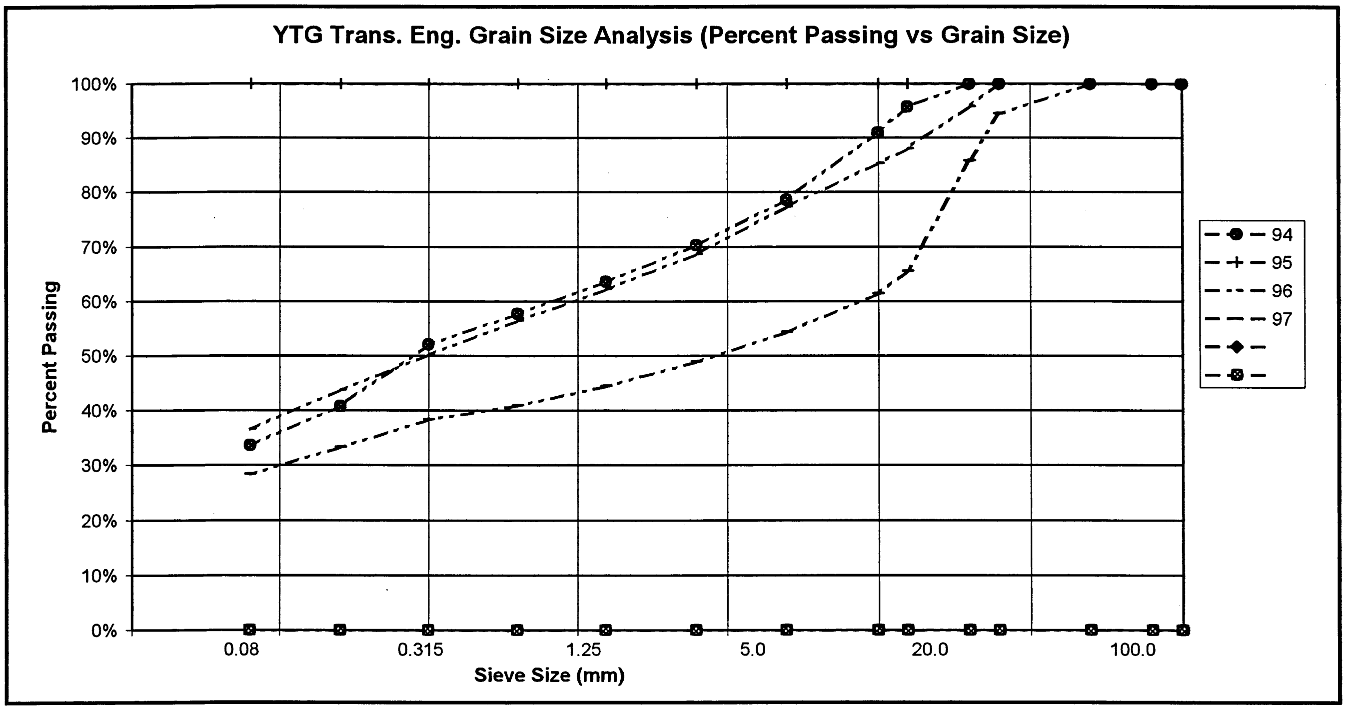


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1745+100 15M LT
LOGGED BY: G.C.

HOLE No.: 541-1316

DATE COMP: 2000/04/28

FIELD NO:	94	95	96	97		
LAB NO:	399	LOST	401	402		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	94%		
20.0	100%	100%	96%	86%		
12.5	96%	100%	88%	66%		
10.0	91%	100%	85%	61%		
5.0	79%	100%	77%	54%		
2.5	70%	100%	69%	49%		
1.25	64%	100%	62%	44%		
0.630	58%	100%	56%	41%		
0.315	52%	100%	50%	38%		
0.160	41%	100%	44%	33%		
0.080	34%	100%	37%	28%		
M.C.(%):	6%	7%	9%	7%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	21	0	23	46		
% SAND:	45	0	41	26		
% FINES:	34	100	37	28		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	[redacted])	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)		

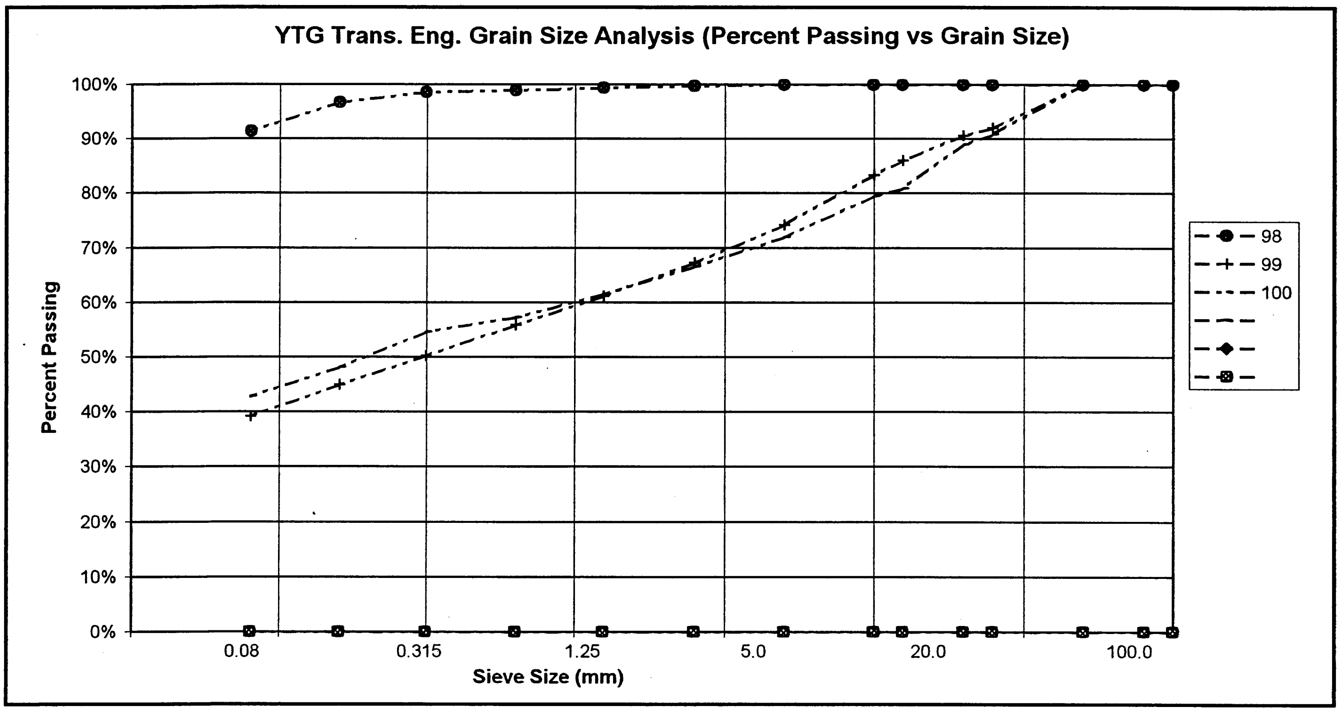


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1745+150 7M LT
LOGGED BY: G.C.

HOLE No.: 541-1317

DATE COMP: 2000/04/28

FIELD NO:	98	99	100			
LAB NO:	403	404	405			
DEPTH:	1.0-1.3	2.4-2.6	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	92%	91%			
20.0	100%	91%	89%			
12.5	100%	86%	81%			
10.0	100%	83%	79%			
5.0	100%	74%	72%			
2.5	100%	67%	67%			
1.25	99%	61%	62%			
0.630	99%	56%	57%			
0.315	99%	50%	55%			
0.160	97%	45%	48%			
0.080	91%	39%	43%			
M.C.(%):	18%	9%	7%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	0	26	28			
% SAND:	9	35	29			
% FINES:	91	39	43			
CLASSIFICATION	SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



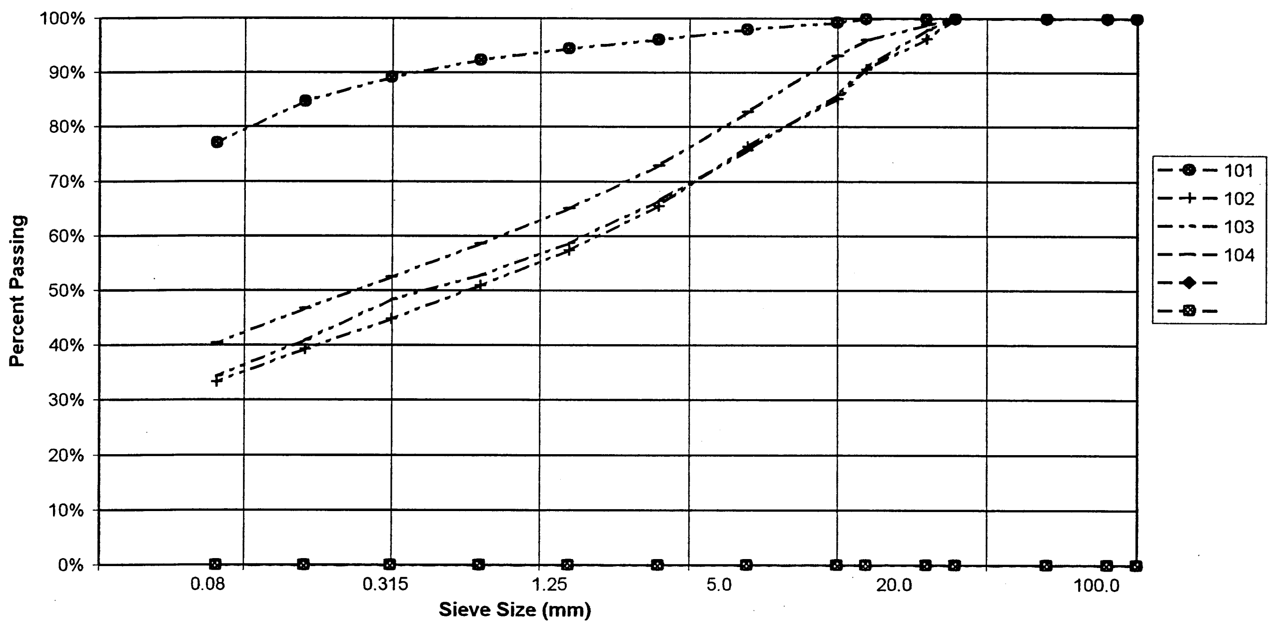
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1745+250 20M LT
LOGGED BY: G.C.

HOLE No.: 541-1318

DATE COMP: 2000/04/28

FIELD NO:	101	102	103	104		
LAB NO:	406	407	408	409		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	96%	98%	99%		
12.5	100%	91%	91%	96%		
10.0	99%	85%	86%	93%		
5.0	98%	76%	76%	83%		
2.5	96%	65%	66%	73%		
1.25	94%	57%	59%	65%		
0.630	92%	51%	53%	59%		
0.315	89%	45%	48%	52%		
0.160	85%	39%	41%	47%		
0.080	77%	33%	34%	40%		
M.C.(%):	50%	17%	11%	12%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	2	24	24	17		
% SAND:	21	43	41	42		
% FINES:	77	33	34	40		
CLASSIFICATION	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

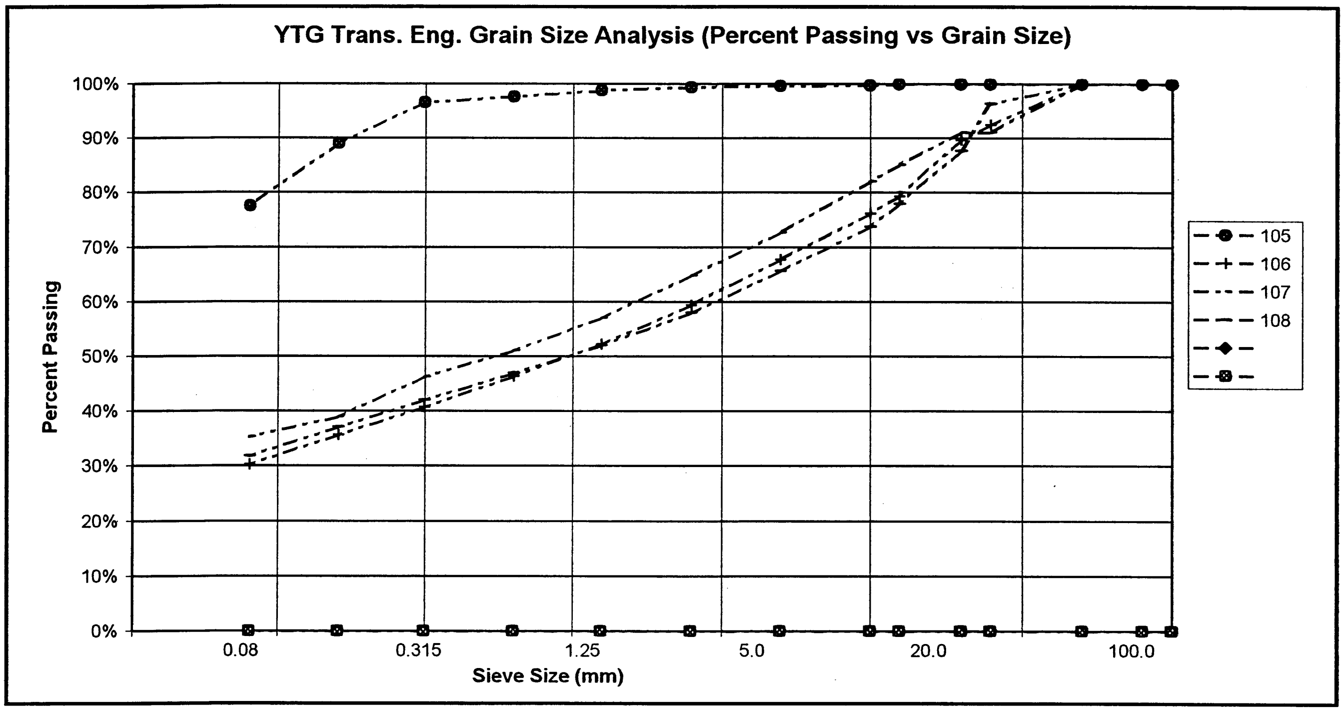


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1745+350 15M LT
LOGGED BY: G.C.

HOLE No.: 541-1319

DATE COMP: 2000/04/28

FIELD NO:	105	106	107	108		
LAB NO:	410	411	412	413		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	92%	91%	96%		
20.0	100%	90%	91%	88%		
12.5	100%	79%	85%	78%		
10.0	100%	76%	82%	74%		
5.0	100%	68%	73%	66%		
2.5	99%	59%	65%	58%		
1.25	99%	52%	57%	52%		
0.630	98%	46%	51%	47%		
0.315	97%	41%	46%	42%		
0.160	89%	36%	39%	37%		
0.080	78%	30%	35%	32%		
M.C.(%):	24%	11%	13%	7%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	32	27	34		
% SAND:	22	37	37	34		
% FINES:	78	30	35	32		
CLASSIFICATION	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)		

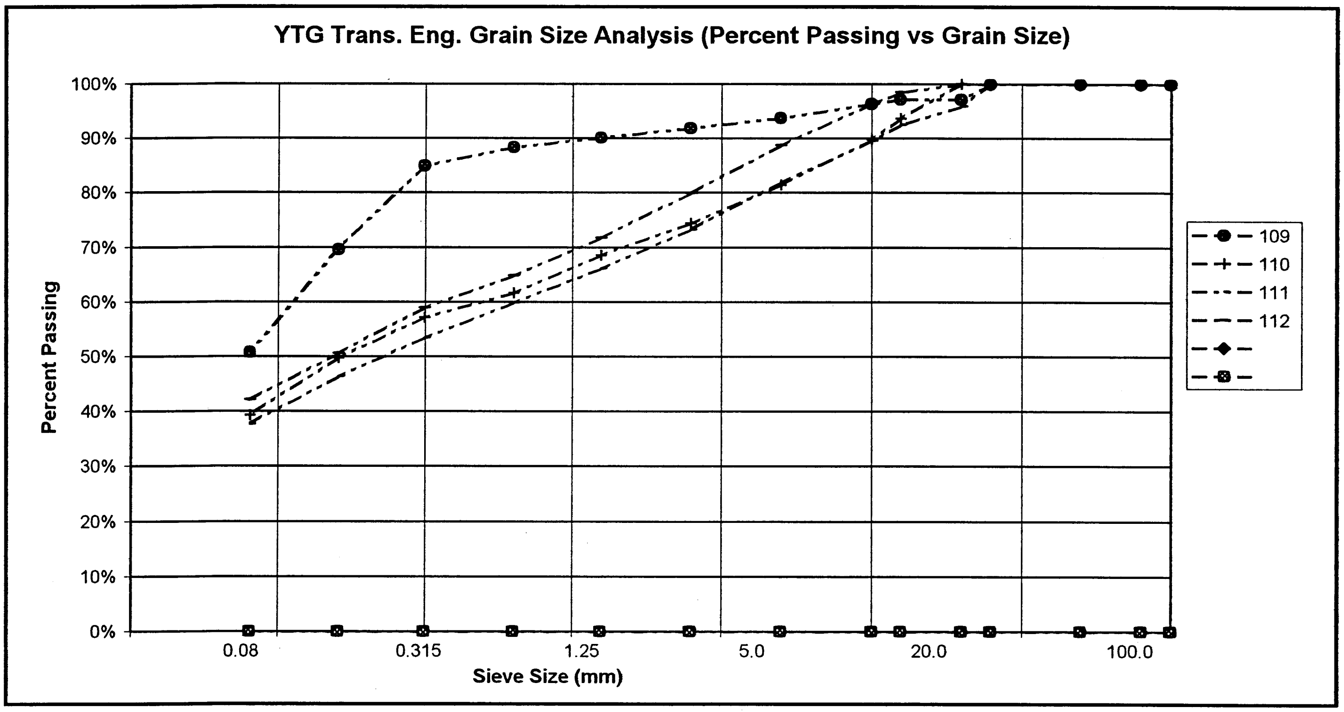

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1745+500 12M LT
LOGGED BY: G.C.

HOLE No.: 541-1320

DATE COMP: 2000/04/28

FIELD NO:	109	110	111	112		
LAB NO:	414	415	416	417		
DEPTH:	1.3-1.5	2.5-2.8	3.6-4.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	97%	100%	96%	100%		
12.5	97%	94%	93%	98%		
10.0	96%	90%	90%	96%		
5.0	94%	81%	82%	89%		
2.5	92%	74%	73%	80%		
1.25	90%	69%	66%	72%		
0.630	88%	62%	60%	65%		
0.315	85%	57%	53%	59%		
0.160	70%	50%	46%	51%		
0.080	51%	39%	38%	42%		
M.C.(%):	23%	15%	13%	15%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	6	19	18	11		
% SAND:	43	42	44	47		
% FINES:	51	39	38	42		
CLASSIFICATION	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)		

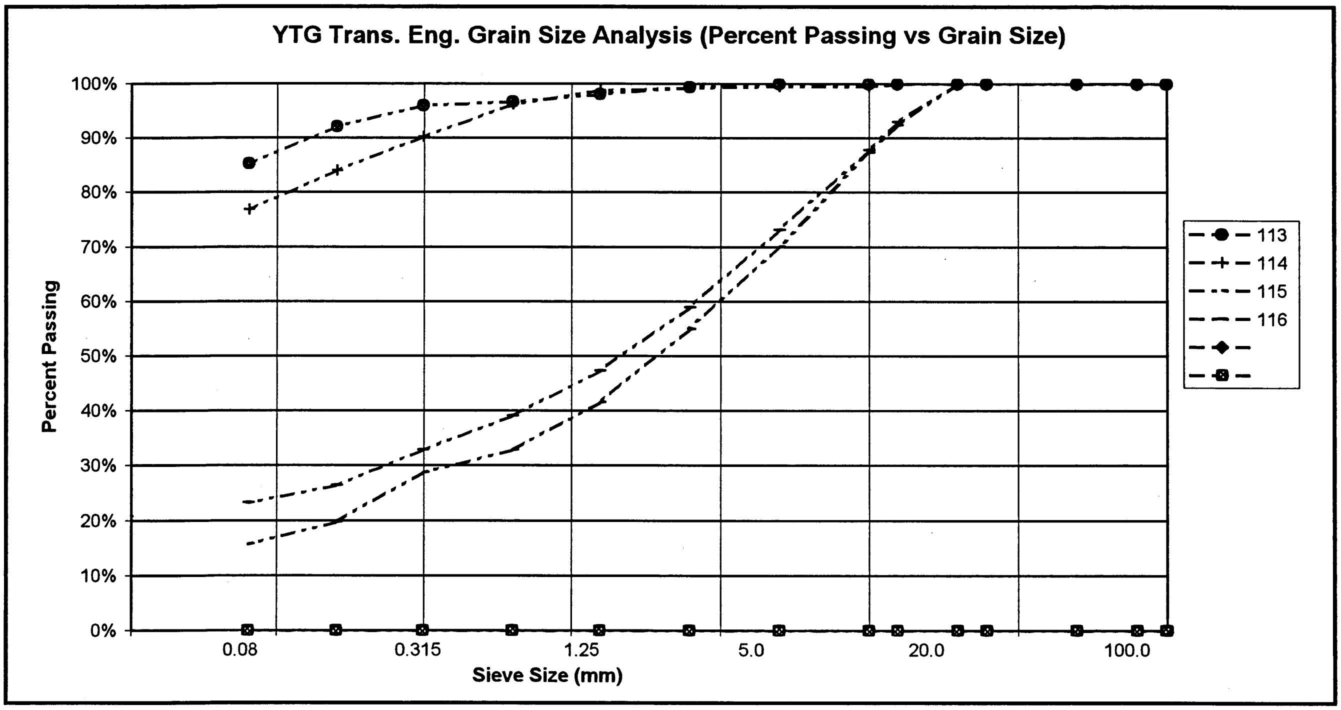


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1745+550 20M LT
LOGGED BY: G.C.

HOLE No.: 541-1321

DATE COMP: 2000/04/28

FIELD NO:	113	114	115	116		
LAB NO:	418	419	420	421		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	100%	100%	100%		
12.5	100%	100%	92%	93%		
10.0	100%	100%	87%	88%		
5.0	100%	99%	70%	73%		
2.5	99%	99%	55%	59%		
1.25	98%	99%	42%	47%		
0.630	97%	96%	33%	39%		
0.315	96%	90%	29%	33%		
0.160	92%	84%	20%	26%		
0.080	85%	77%	16%	23%		
M.C.(%):	72%	43%	9%	9%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	1	30	27		
% SAND:	15	23	54	50		
% FINES:	85	77	16	23		
CLASSIFICATION	SILT (ML)	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		


YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

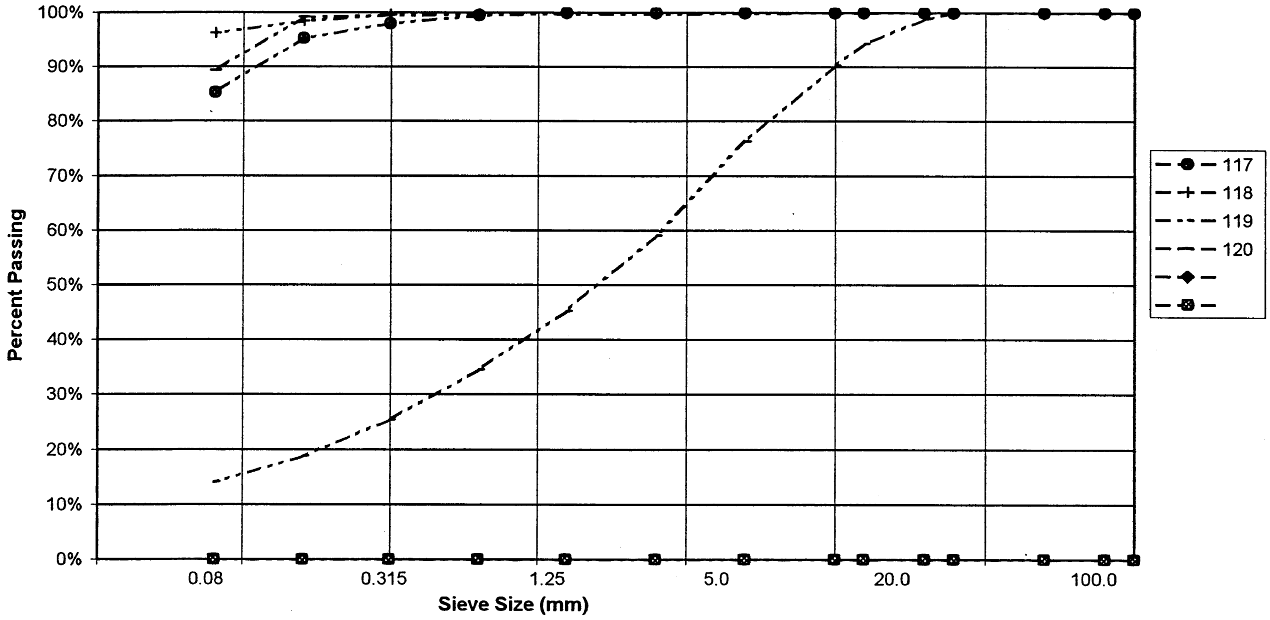
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1745+650 CL
LOGGED BY: G.C.

HOLE No.: 541-1322

DATE COMP: 2000/04/28

FIELD NO:	117	118	119	120		
LAB NO:	422	423	424	425		
DEPTH:	1.0-1.5	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	100%	99%	100%		
12.5	100%	100%	94%	100%		
10.0	100%	100%	90%	100%		
5.0	100%	100%	76%	100%		
2.5	100%	100%	59%	100%		
1.25	100%	100%	45%	100%		
0.630	100%	100%	35%	100%		
0.315	98%	100%	25%	100%		
0.160	95%	98%	19%	99%		
0.080	85%	96%	14%	89%		
M.C.(%):	49%	84%	11%	31%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	0	24	0		
% SAND:	15	4	62	11		
% FINES:	85	96	14	89		
CLASSIFICATION	SILT (ML)	SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILT (ML)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

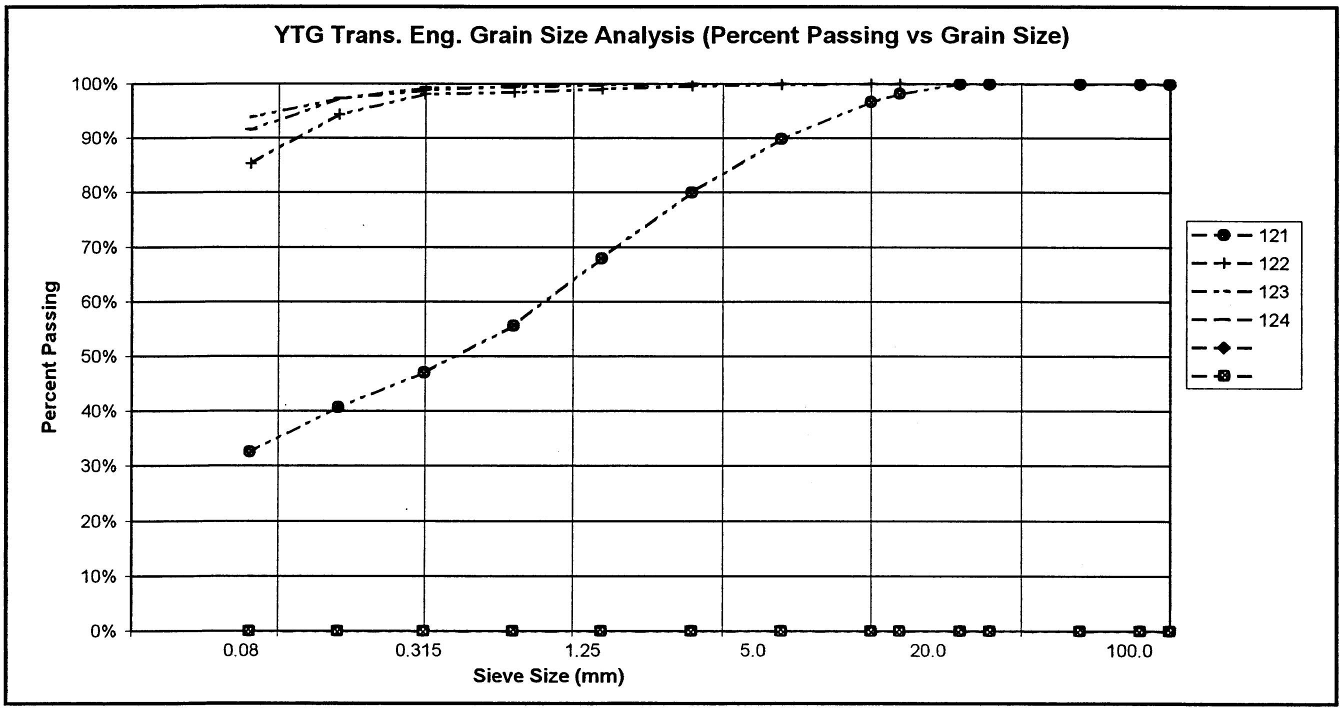


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1745+750 CL
LOGGED BY: G.C.

HOLE No.: 541-1323

DATE COMP: 2000/04/28

FIELD NO:	121	122	123	124		
LAB NO:	426	427	428	429		
DEPTH:	1.0-1.4	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	100%	100%	100%		
12.5	98%	100%	100%	100%		
10.0	97%	100%	100%	100%		
5.0	90%	100%	100%	100%		
2.5	80%	100%	100%	100%		
1.25	68%	99%	100%	100%		
0.630	56%	98%	100%	99%		
0.315	47%	98%	99%	99%		
0.160	41%	94%	97%	97%		
0.080	33%	85%	94%	92%		
M.C.(%):	24%	46%	42%	29%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	10	0	0	0		
% SAND:	57	15	6	8		
% FINES:	33	85	94	92		
CLASSIFICATION	SILTY SAND (SM)	SILT (ML)	SILT (ML)	SILT (ML)		

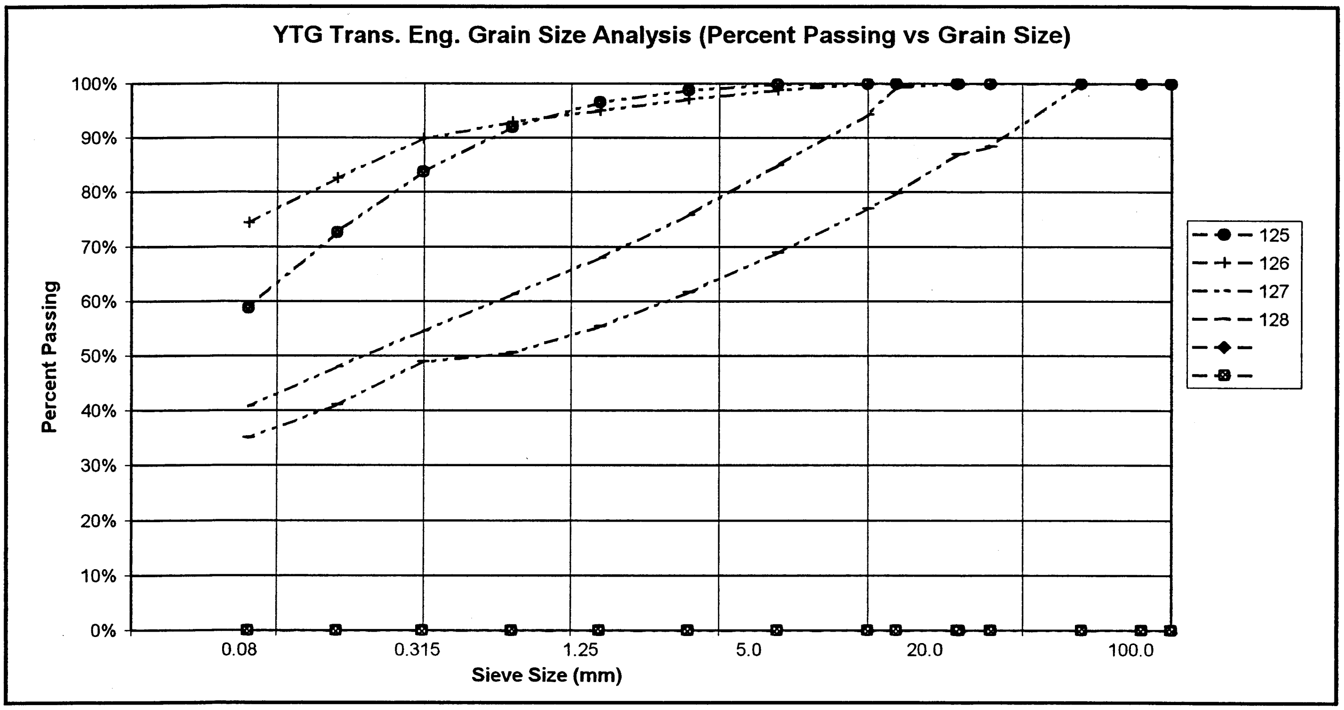


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1745+850 CL
LOGGED BY: G.C.

HOLE No.: 541-1324

DATE COMP: 2000/04/28

FIELD NO:	125	126	127	128		
LAB NO:	430	431	432	433		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	88%		
20.0	100%	100%	100%	87%		
12.5	100%	100%	99%	80%		
10.0	100%	100%	94%	77%		
5.0	100%	99%	85%	69%		
2.5	99%	97%	76%	62%		
1.25	97%	95%	68%	55%		
0.630	92%	93%	61%	51%		
0.315	84%	90%	55%	49%		
0.160	73%	83%	48%	41%		
0.080	59%	74%	41%	35%		
M.C.(%):	53%	41%	9%	8%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	1	15	31		
% SAND:	41	24	44	34		
% FINES:	59	74	41	35		
CLASSIFICATION	SANDY SILT (ML)	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		

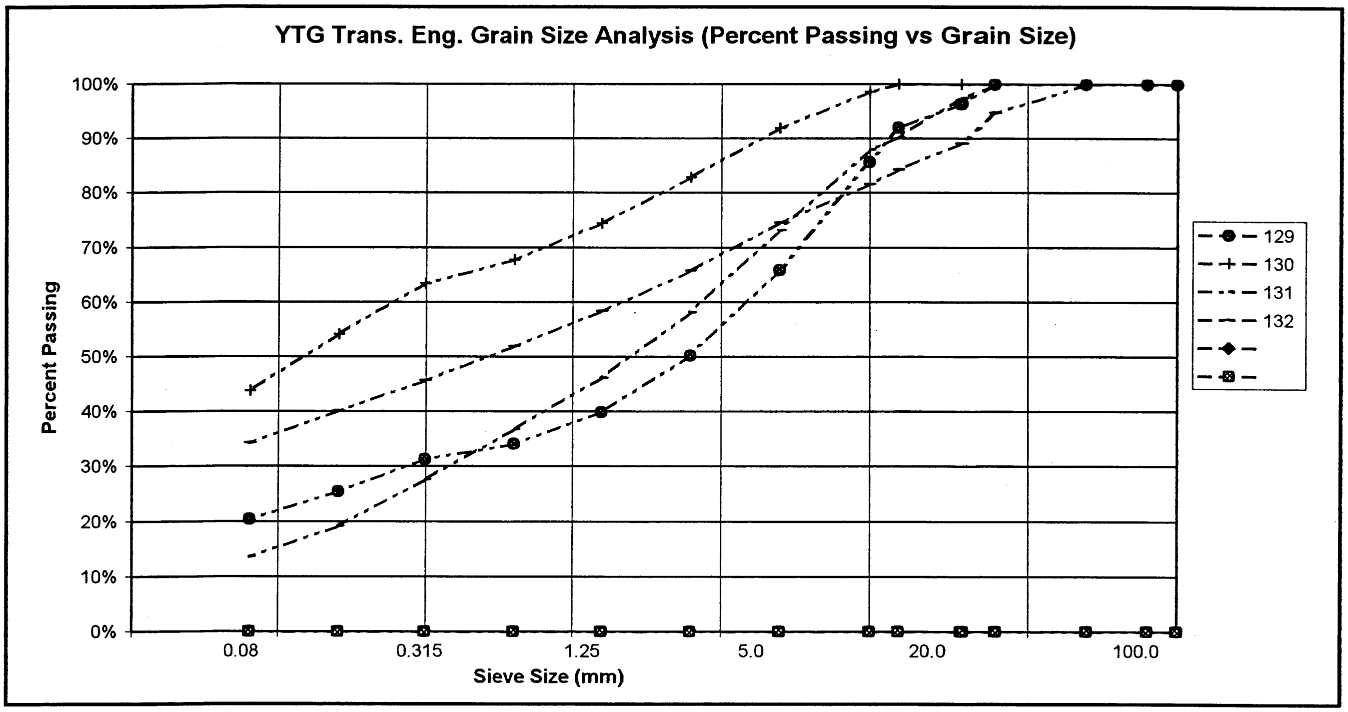

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1746+050 CL
LOGGED BY: G.C.

HOLE No.: 541-1325

DATE COMP: 2000/04/28

FIELD NO:	129	130	131	132		
LAB NO:	434	435	436	437		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	95%		
20.0	96%	100%	97%	89%		
12.5	92%	100%	90%	84%		
10.0	86%	99%	88%	82%		
5.0	66%	92%	73%	75%		
2.5	50%	83%	58%	66%		
1.25	40%	74%	46%	58%		
0.630	34%	68%	37%	52%		
0.315	31%	63%	28%	46%		
0.160	25%	54%	19%	40%		
0.080	20%	44%	14%	34%		
M.C.(%):	34%	28%	13%	12%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	34	8	27	25		
% SAND:	45	48	60	40		
% FINES:	20	44	14	34		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		


YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

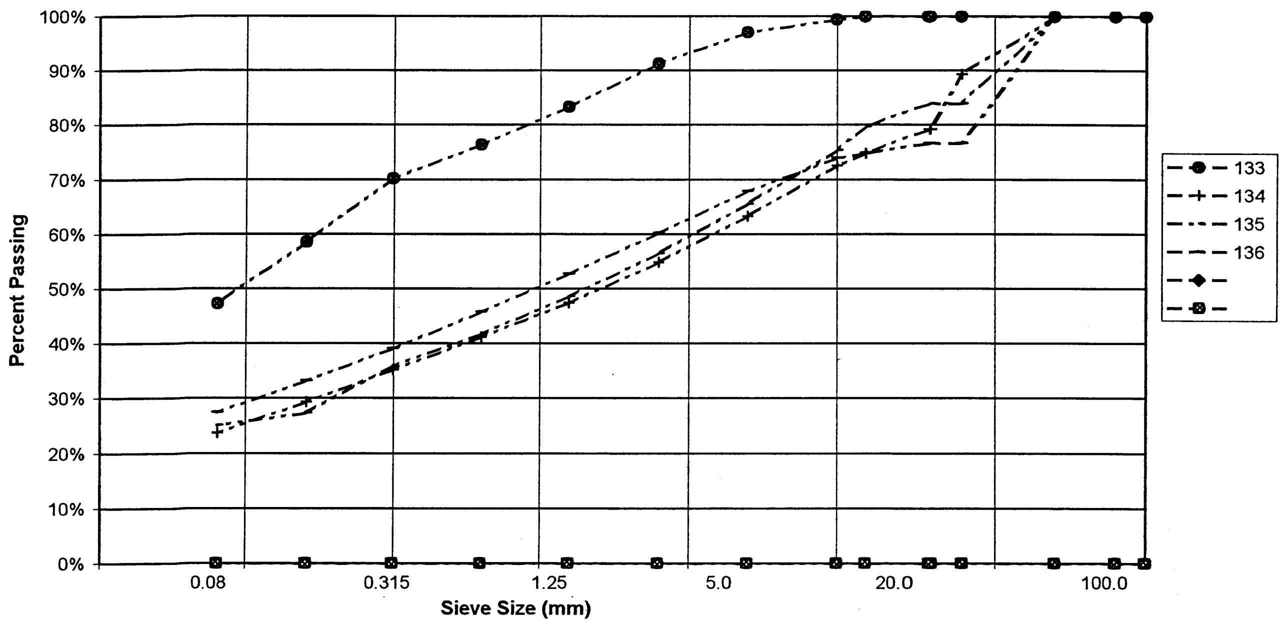
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1746+150 CL
LOGGED BY: G.C.

HOLE No.: 541-1326

DATE COMP: 2000/04/28

FIELD NO:	133	134	135	136		
LAB NO:	438	439	440	441		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	89%	84%	77%		
20.0	100%	79%	84%	77%		
12.5	100%	75%	80%	75%		
10.0	99%	73%	75%	74%		
5.0	97%	63%	65%	68%		
2.5	91%	55%	56%	60%		
1.25	83%	47%	49%	53%		
0.630	76%	41%	42%	46%		
0.315	70%	35%	36%	39%		
0.160	59%	29%	27%	33%		
0.080	47%	24%	25%	27%		
M.C.(%):	21%	8%	18%	7%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	3	37	35	32		
% SAND:	50	40	40	40		
% FINES:	47	24	25	27		
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

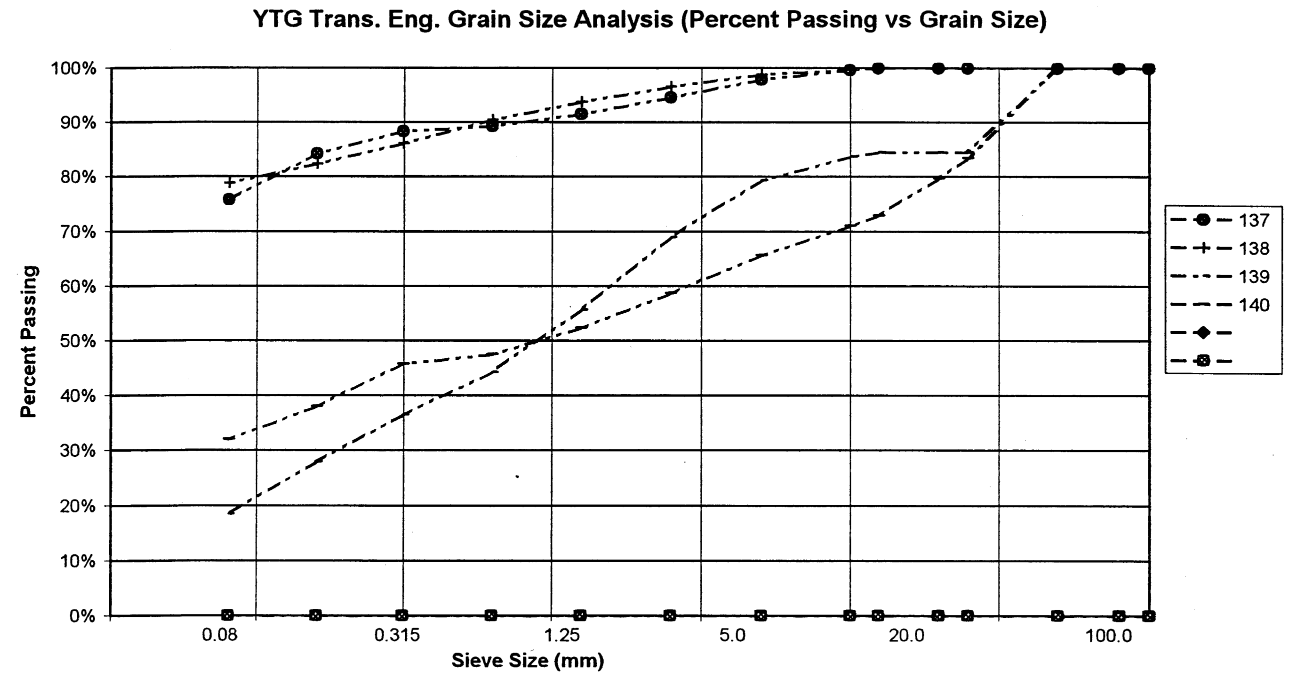


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1746+150 20M RT
LOGGED BY: G.C.

HOLE No.: 542-1327

DATE COMP: 2000/05/02

FIELD NO:	137	138	139	140		
LAB NO:	442	443	444	445		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	85%	83%		
20.0	100%	100%	85%	80%		
12.5	100%	100%	85%	73%		
10.0	100%	100%	84%	71%		
5.0	98%	99%	79%	66%		
2.5	95%	97%	69%	59%		
1.25	92%	94%	56%	52%		
0.630	89%	91%	44%	48%		
0.315	88%	86%	36%	46%		
0.160	84%	82%	28%	38%		
0.080	76%	79%	18%	32%		
M.C.(%):	24%	39%	11%	15%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	2	1	21	34		
% SAND:	22	20	61	33		
% FINES:	76	79	18	32		
CLASSIFICATION	SILT WITH SAND (ML)	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)		

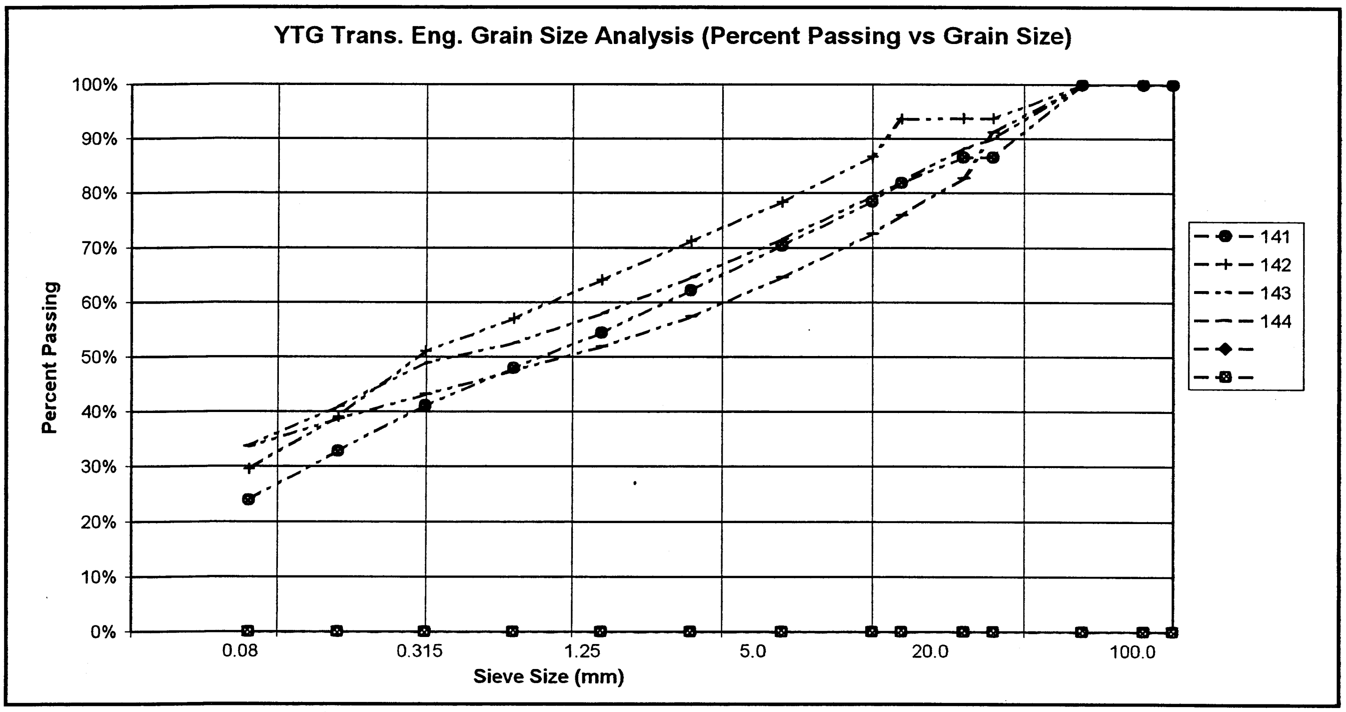


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1746+150 20M LT
LOGGED BY: G.C.

HOLE No.: 542-1328

DATE COMP: 2000/05/02

FIELD NO:	141	142	143	144		
LAB NO:	446	447	448	449		
DEPTH:	1.0-1.5	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	87%	94%	90%	91%		
20.0	87%	94%	88%	83%		
12.5	82%	94%	82%	76%		
10.0	79%	87%	79%	73%		
5.0	70%	78%	72%	65%		
2.5	62%	71%	65%	57%		
1.25	54%	64%	58%	52%		
0.630	48%	57%	53%	48%		
0.315	41%	51%	49%	43%		
0.160	33%	39%	41%	39%		
0.080	24%	30%	34%	34%		
M.C.(%):	8%	13%	9%	16%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	30	22	28	35		
% SAND:	46	49	38	31		
% FINES:	24	30	34	34		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)		

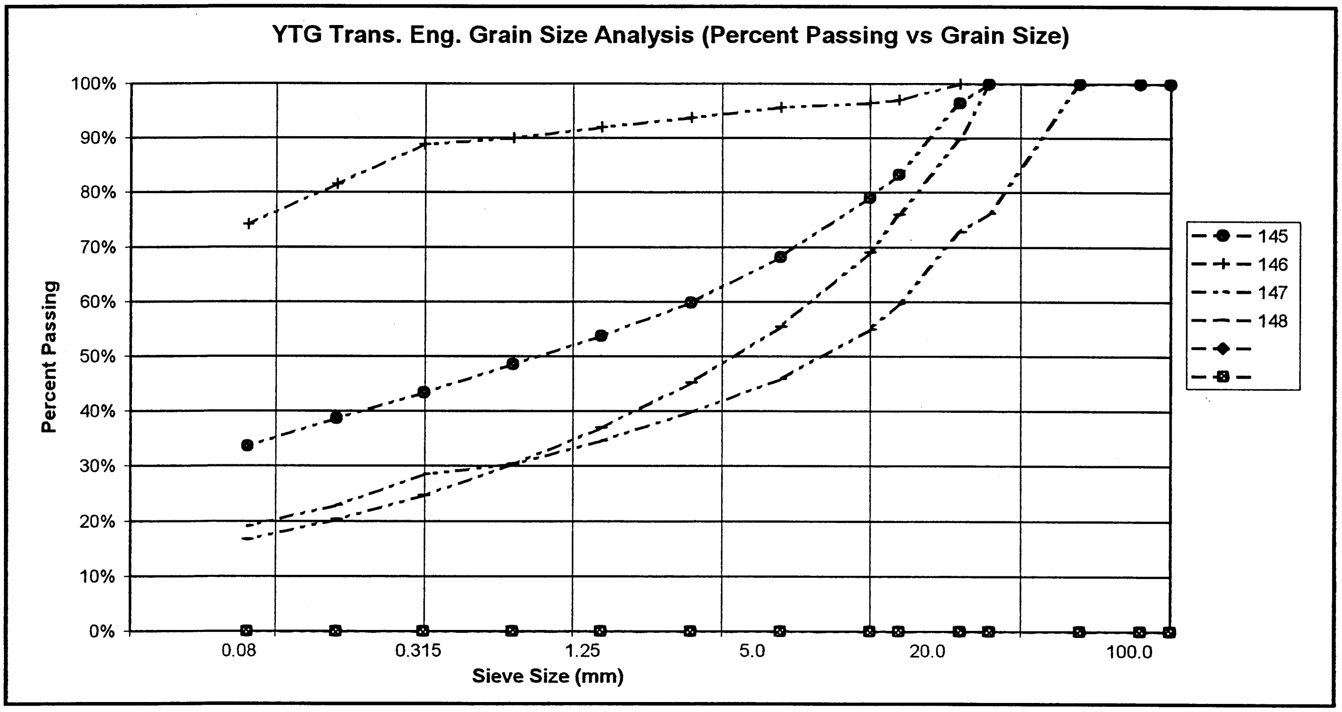

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1743+010 15M RT
LOGGED BY: G.C.

HOLE No.: 542-1329

DATE COMP: 2000/05/02

FIELD NO:	145	146	147	148		
LAB NO:	450	451	452	453		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	76%	100%		
20.0	96%	100%	73%	90%		
12.5	83%	97%	60%	76%		
10.0	79%	97%	55%	69%		
5.0	68%	96%	46%	55%		
2.5	60%	94%	40%	45%		
1.25	54%	92%	35%	37%		
0.630	49%	90%	30%	30%		
0.315	43%	89%	28%	25%		
0.160	39%	82%	23%	20%		
0.080	34%	74%	19%	17%		
M.C.(%):	12%	27%	8%	7%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	32	4	54	45		
% SAND:	34	22	27	39		
% FINES:	34	74	19	17		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILT WITH SAND (ML)	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)		

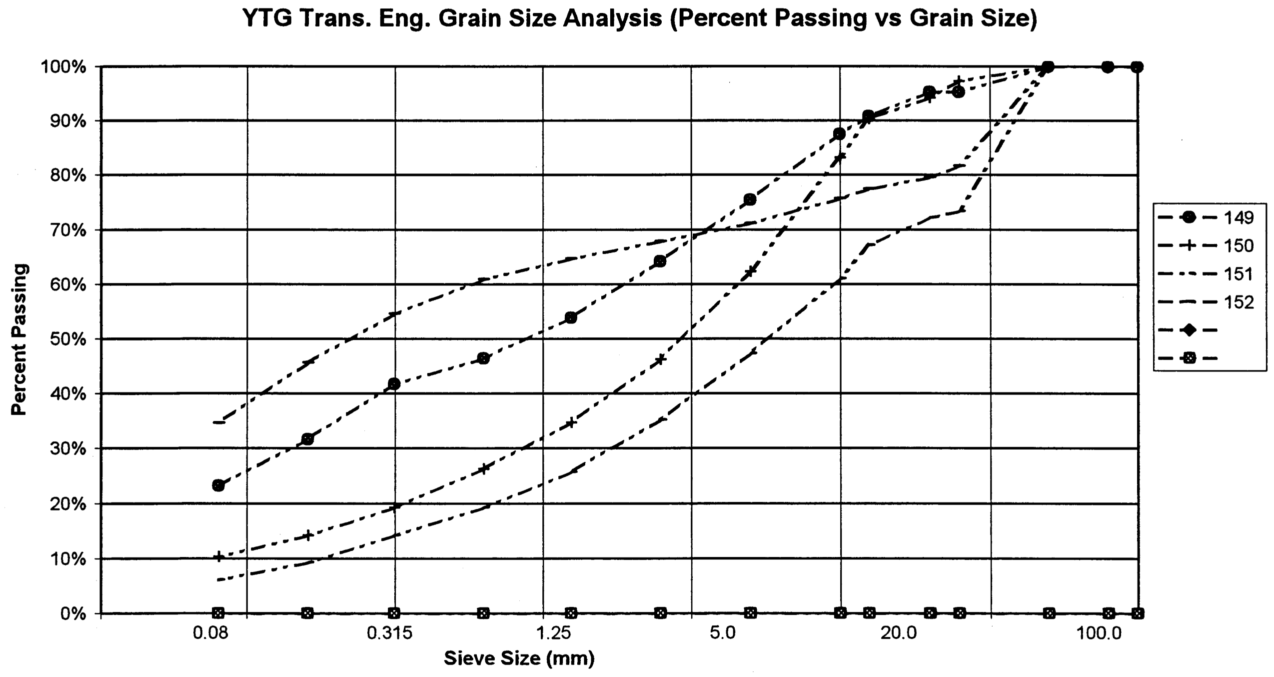


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1743+250 12M RT
LOGGED BY: G.C.

HOLE No.: 542-1330

DATE COMP: 2000/05/02

FIELD NO:	149	150	151	152		
LAB NO:	454	455	456	457		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	95%	97%	73%	82%		
20.0	95%	94%	72%	80%		
12.5	91%	90%	67%	78%		
10.0	88%	83%	61%	76%		
5.0	76%	62%	47%	71%		
2.5	64%	46%	35%	68%		
1.25	54%	35%	26%	65%		
0.630	46%	26%	19%	61%		
0.315	42%	19%	14%	55%		
0.160	32%	14%	9%	46%		
0.080	23%	10%	6%	35%		
M.C.(%):	12%	3%	2%	33%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	24	38	53	29		
% SAND:	52	52	41	37		
% FINES:	23	10	6	35		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)		

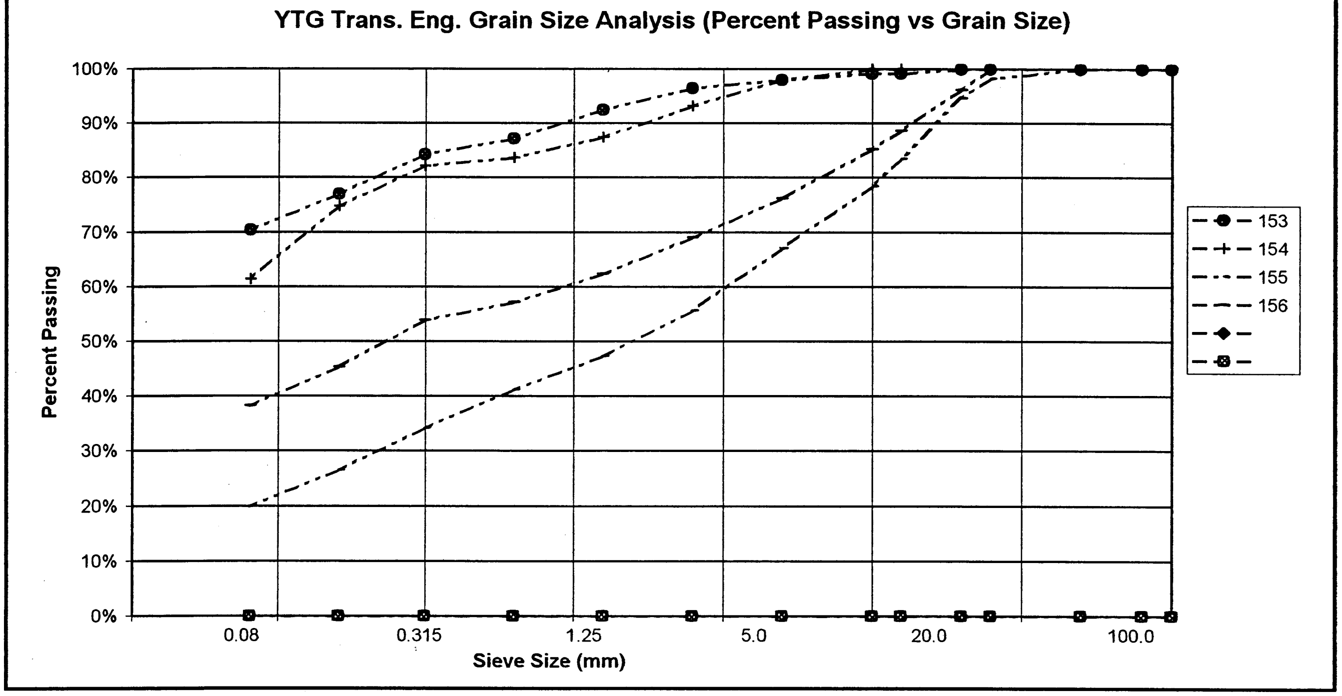

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1743+555 12M RT
LOGGED BY: G.C.

HOLE No.: 542-1331

DATE COMP: 2000/05/02

FIELD NO:	153	154	155	156		
LAB NO:	458	459	460	461		
DEPTH:	1.5-2.0	2.8-3.0	3.8-4.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	98%	100%		
20.0	100%	100%	95%	96%		
12.5	99%	100%	83%	89%		
10.0	99%	100%	78%	85%		
5.0	98%	98%	67%	76%		
2.5	97%	93%	56%	69%		
1.25	93%	87%	47%	62%		
0.630	87%	84%	41%	57%		
0.315	84%	82%	34%	54%		
0.160	77%	75%	26%	45%		
0.080	70%	61%	20%	38%		
M.C.(%):	35%	23%	12%	11%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	2	2	33	24		
% SAND:	28	37	47	38		
% FINES:	70	61	20	38		
CLASSIFICATION	SILT WITH SAND (ML)	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		

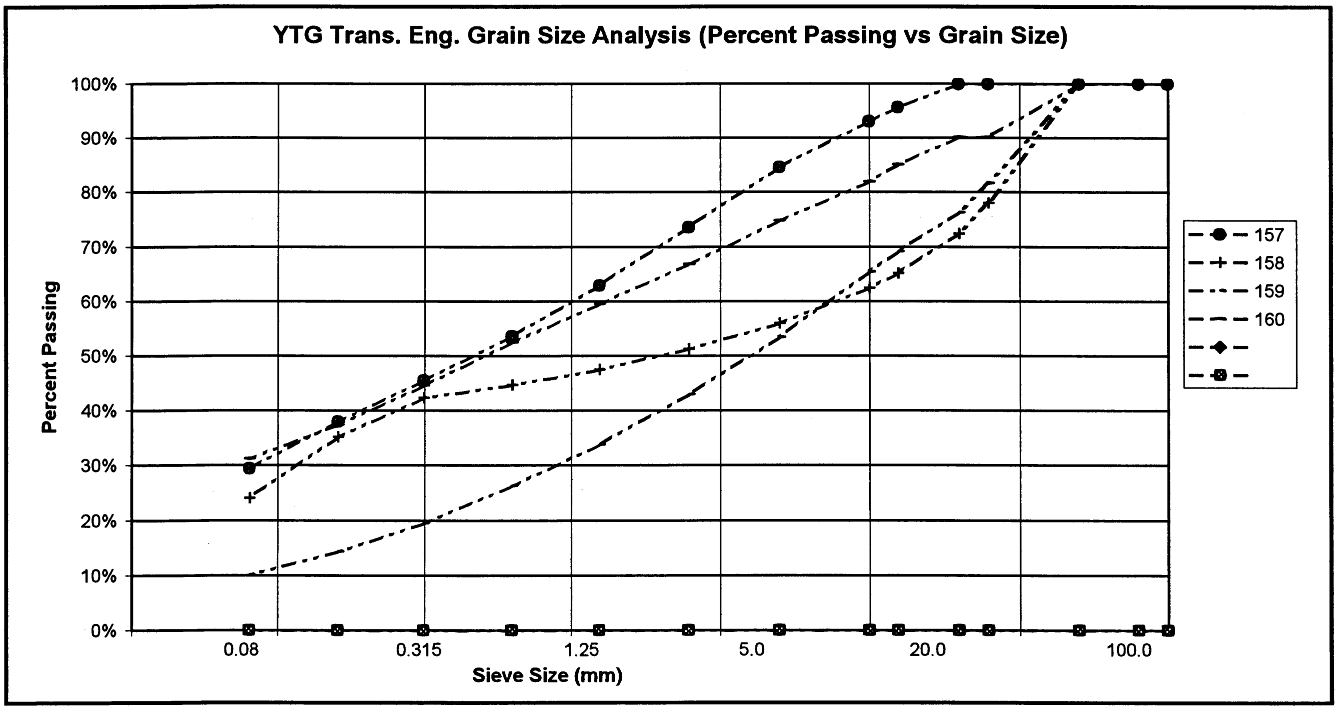


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1743+700 12M RT
LOGGED BY: G.C.

HOLE No.: 542-1332

DATE COMP: 2000/05/02

FIELD NO:	157	158	159	160		
LAB NO:	462	463	464	465		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	78%	82%	90%		
20.0	100%	72%	76%	90%		
12.5	96%	65%	69%	85%		
10.0	93%	62%	65%	82%		
5.0	85%	56%	53%	75%		
2.5	74%	51%	43%	67%		
1.25	63%	48%	34%	60%		
0.630	54%	45%	26%	52%		
0.315	46%	42%	20%	45%		
0.160	38%	35%	14%	37%		
0.080	29%	24%	10%	31%		
M.C.(%):	7%	6%	3%	15%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	15	44	47	25		
% SAND:	55	32	43	44		
% FINES:	29	24	10	31		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)		


YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

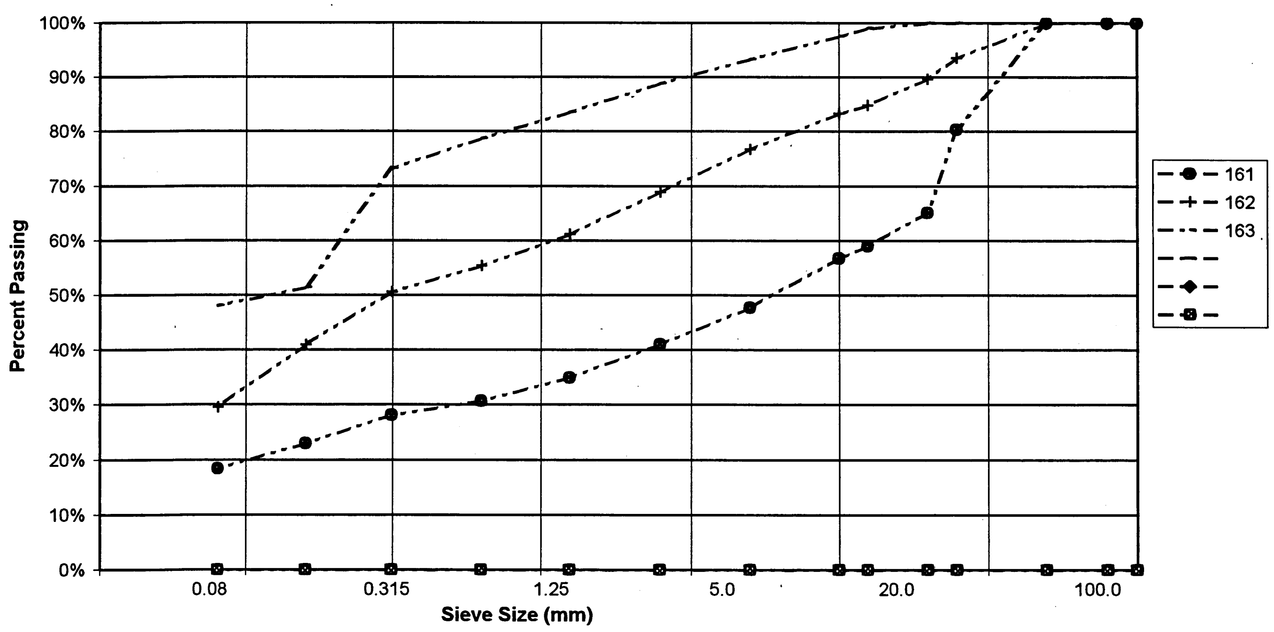
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1743+850 12M RT
LOGGED BY: G.C.

HOLE No.: 542-1333

DATE COMP: 2000/05/02

FIELD NO:	161	162	163			
LAB NO:	466	467	468			
DEPTH:	1.8-2.0	2.8-3.0	4.0-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	80%	94%	100%			
20.0	65%	90%	100%			
12.5	59%	85%	99%			
10.0	57%	83%	98%			
5.0	48%	77%	93%			
2.5	41%	69%	89%			
1.25	35%	61%	84%			
0.630	31%	55%	79%			
0.315	28%	51%	73%			
0.160	23%	41%	51%			
0.080	18%	30%	48%			
M.C.(%):	15%	15%	24%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	52	23	7			
% SAND:	29	47	45			
% FINES:	18	30	48			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)			

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

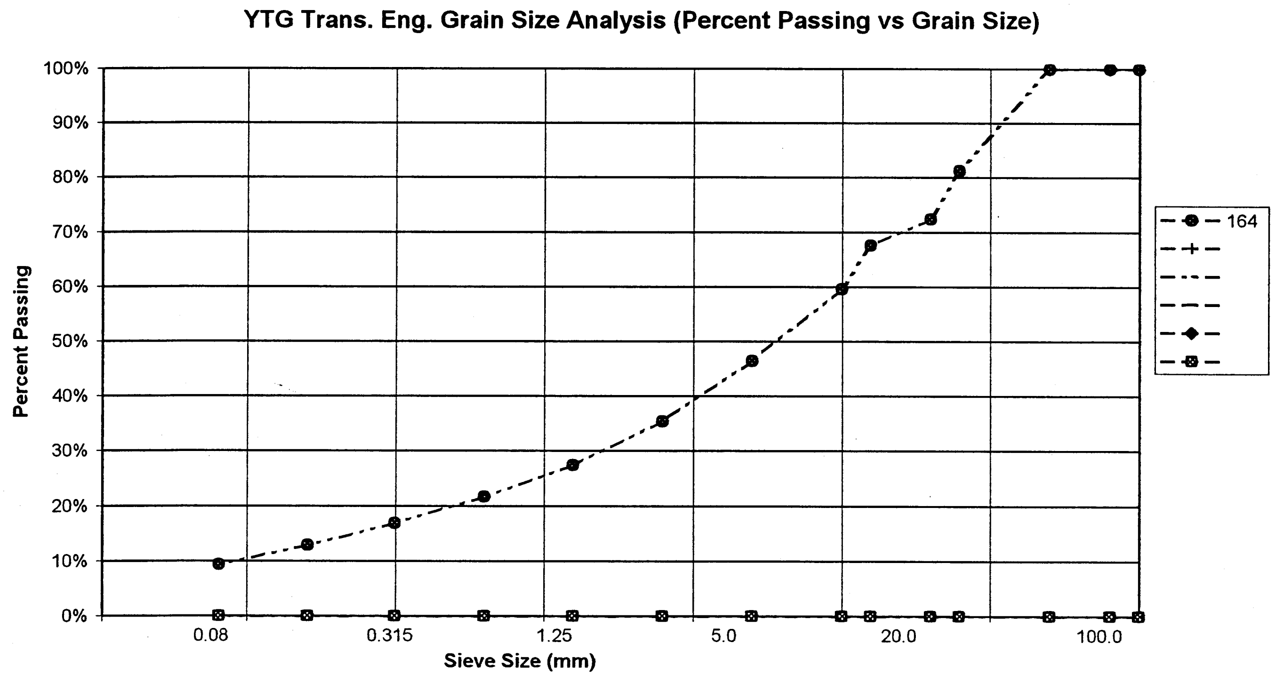


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1743-900 12M RT
LOGGED BY: G.C.

HOLE No.: 543-1334

DATE COMP: 2000/05/02

FIELD NO:	164					
LAB NO:	469					
DEPTH:	0.8-1.0					
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**					
100.0	100%					
80.0	100%					
50.0	100%					
25.0	81%					
20.0	72%					
12.5	68%					
10.0	60%					
5.0	46%					
2.5	35%					
1.25	28%					
0.630	22%					
0.315	17%					
0.160	13%					
0.080	9%					
M.C.(%):	7%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	54					
% SAND:	37					
% FINES:	9					
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)					

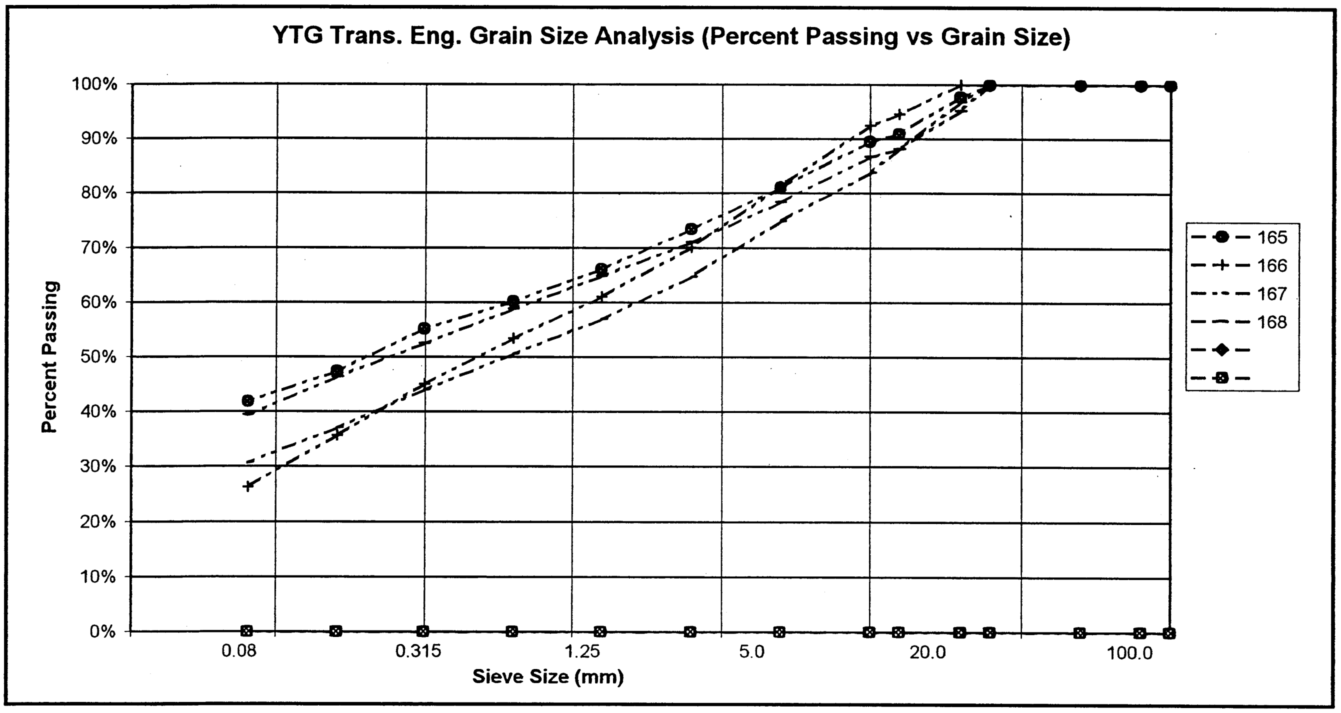


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1744+000 12M RT
LOGGED BY: G.C.

HOLE No.: 543-1335

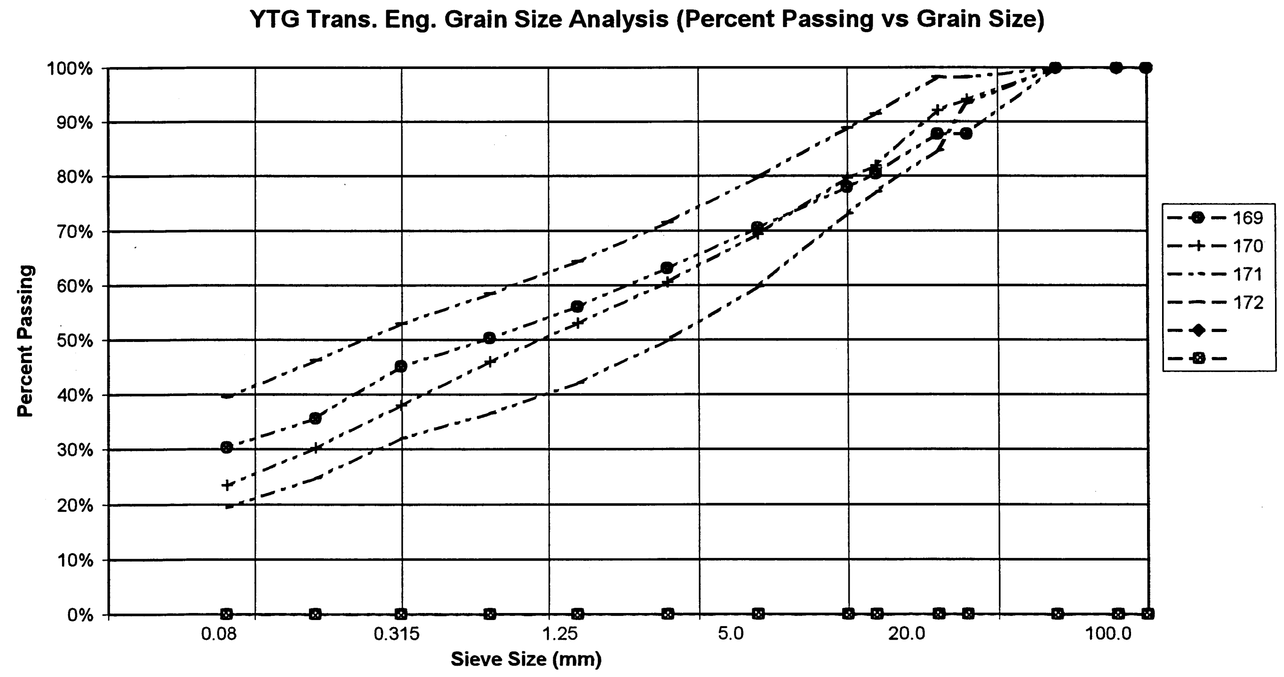
DATE COMP: 2000/05/10

FIELD NO:	165	166	167	168		
LAB NO:	470	471	472	473		
DEPTH:	1.3-1.5	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	98%	100%	97%	95%		
12.5	91%	95%	88%	88%		
10.0	90%	93%	84%	87%		
5.0	81%	81%	75%	78%		
2.5	73%	70%	65%	71%		
1.25	66%	61%	57%	65%		
0.630	60%	53%	51%	59%		
0.315	55%	45%	44%	53%		
0.160	47%	36%	37%	46%		
0.080	42%	26%	31%	39%		
M.C.(%):	10%	20%	15%	10%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	19	19	25	22		
% SAND:	39	55	44	39		
% FINES:	42	26	31	39		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		



PROJECT NUMBER: 092-202101-0361-1
HOLE No.: 543-1336
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1744+050 15M RT
LOGGED BY: G.C.
DATE COMP: 2000/05/10

FIELD NO:	169	170	171	172		
LAB NO:	474	475	476	477		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	88%	94%	93%	98%		
20.0	88%	92%	85%	98%		
12.5	80%	82%	77%	91%		
10.0	78%	80%	73%	89%		
5.0	71%	69%	60%	80%		
2.5	63%	61%	50%	71%		
1.25	56%	53%	42%	64%		
0.630	50%	46%	37%	58%		
0.315	45%	38%	32%	53%		
0.160	36%	30%	25%	46%		
0.080	30%	24%	19%	40%		
M.C.(%):	30%	17%	14%	11%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	29	31	40	20		
% SAND:	40	46	40	40		
% FINES:	30	24	19	40		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		

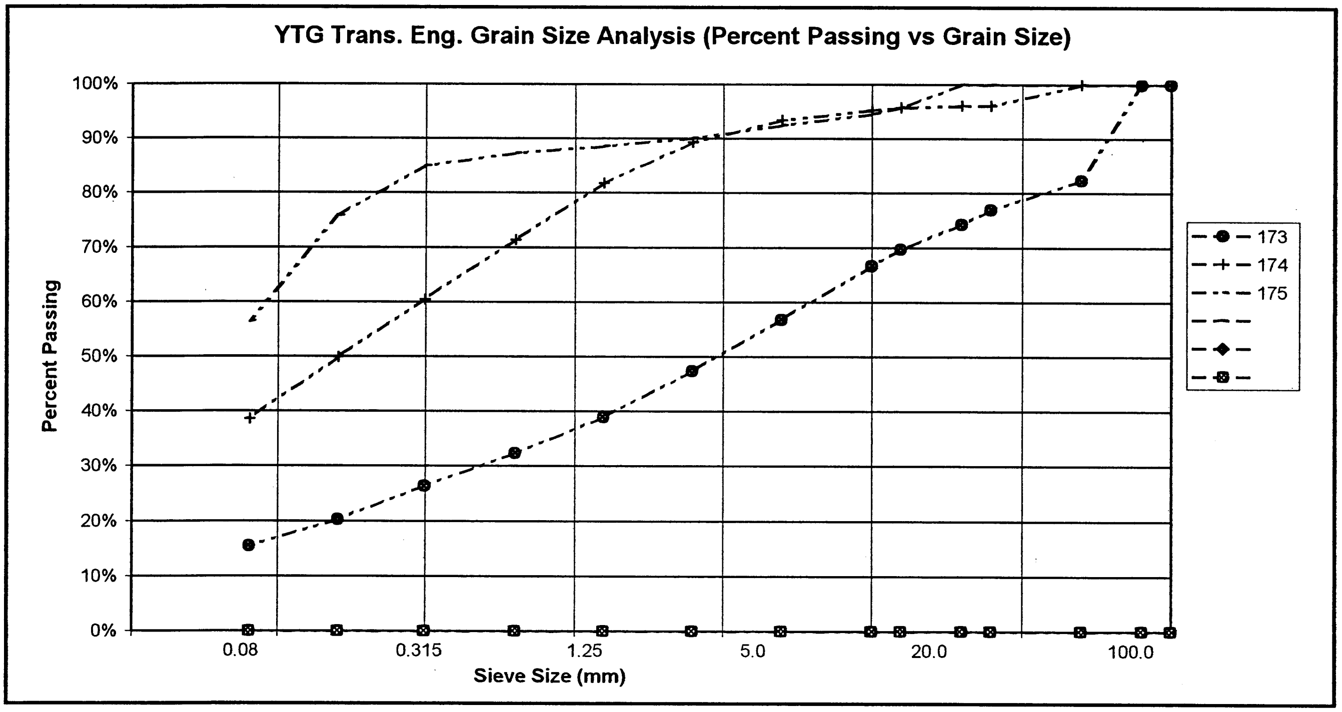


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1744+400 12M RT
LOGGED BY: G.C.

HOLE No.: 543-1337

DATE COMP: 2000/05/10

FIELD NO:	173	174	175			
LAB NO:	478	479	480			
DEPTH:	1.3-1.5	2.8-3.0	4.4-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	82%	100%	100%			
25.0	77%	96%	100%			
20.0	74%	96%	100%			
12.5	70%	96%	96%			
10.0	67%	95%	95%			
5.0	57%	93%	92%			
2.5	47%	89%	90%			
1.25	39%	82%	89%			
0.630	32%	71%	87%			
0.315	26%	61%	85%			
0.160	20%	50%	76%			
0.080	15%	39%	56%			
M.C.(%):	9%	17%	21%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	43	7	8			
% SAND:	41	55	36			
% FINES:	15	39	56			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND (SM)	SANDY SILT (ML)			



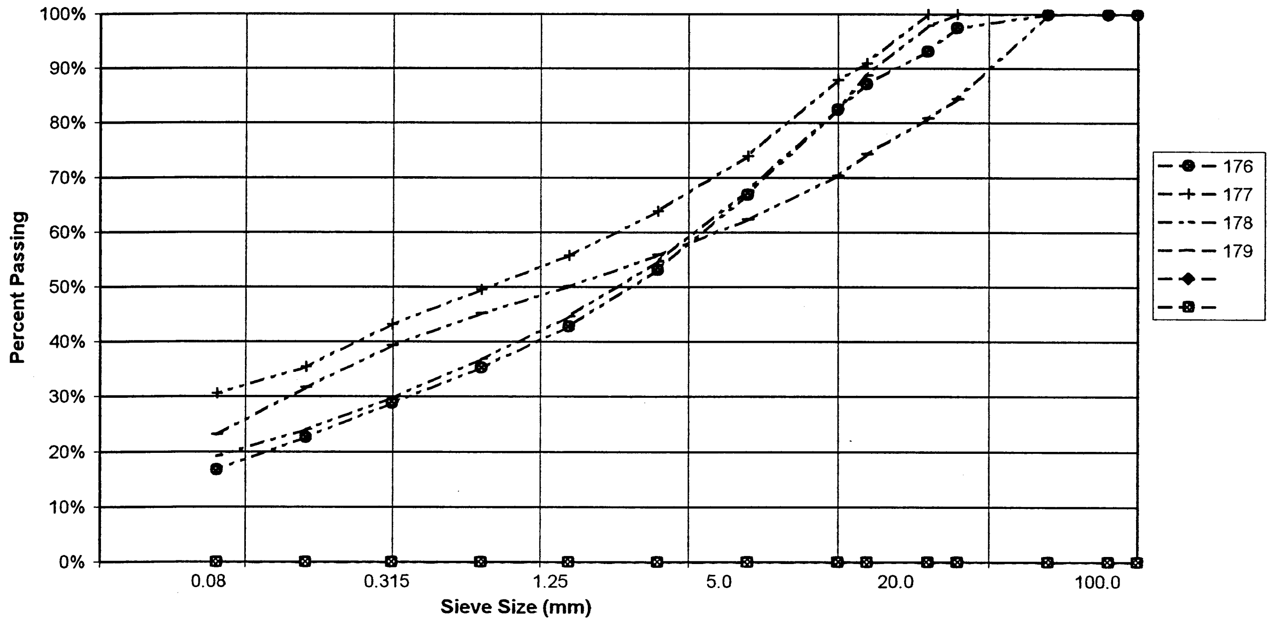
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1744+500 15M RT
LOGGED BY: G.C.

HOLE No.: 543-1338

DATE COMP: 2000/05/10

FIELD NO:	176	177	178	179		
LAB NO:	481	482	483	484		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	98%	100%	100%	84%		
20.0	93%	100%	98%	81%		
12.5	87%	91%	89%	74%		
10.0	82%	88%	83%	70%		
5.0	67%	74%	68%	62%		
2.5	53%	64%	55%	56%		
1.25	43%	56%	45%	50%		
0.630	35%	50%	37%	45%		
0.315	29%	43%	30%	39%		
0.160	23%	35%	24%	32%		
0.080	17%	31%	19%	23%		
M.C.(%):	11%	7%	9%	14%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	33	26	32	38		
% SAND:	50	43	48	39		
% FINES:	17	31	19	23		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

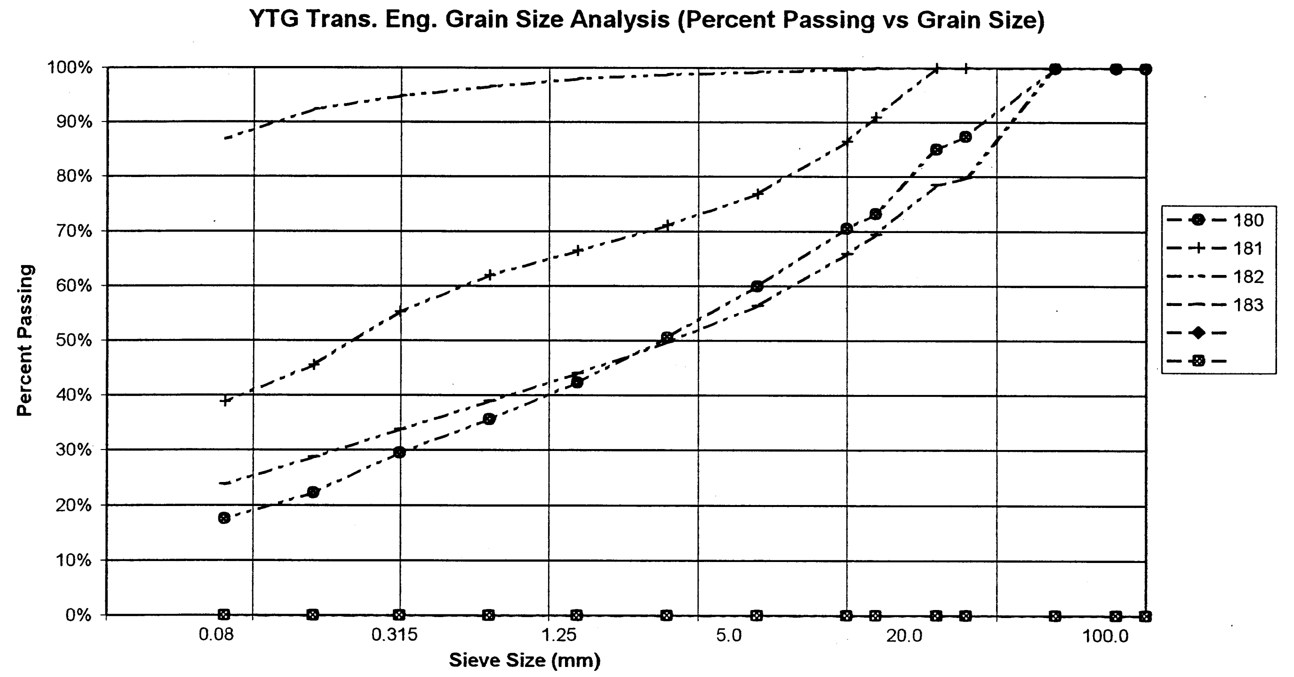


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1744+650 12M RT
LOGGED BY: G.C.

HOLE No.: 543-1339

DATE COMP: 2000/05/10

FIELD NO:	180	181	182	183		
LAB NO:	485	486	487	488		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	87%	100%	100%	80%		
20.0	85%	100%	100%	79%		
12.5	73%	91%	100%	69%		
10.0	71%	87%	100%	66%		
5.0	60%	77%	99%	56%		
2.5	51%	71%	99%	50%		
1.25	42%	66%	98%	44%		
0.630	36%	62%	97%	39%		
0.315	30%	55%	95%	34%		
0.160	22%	46%	92%	29%		
0.080	18%	39%	87%	24%		
M.C.(%):	10%	20%	31%	11%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	40	23	1	44		
% SAND:	42	38	12	33		
% FINES:	18	39	87	24		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILT (ML)	SILTY GRAVEL WITH SAND (GM)		



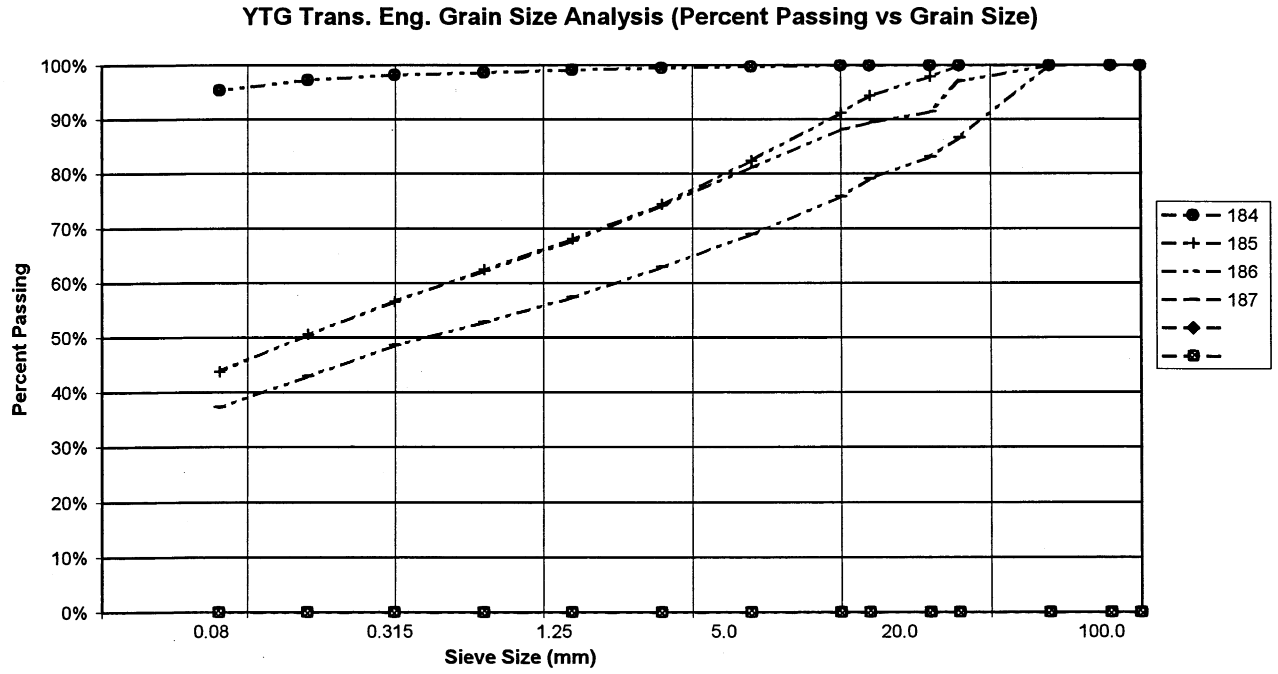
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1744+900 12M RT
LOGGED BY: G.C.

HOLE No.: 543-1340

DATE COMP: 2000/05/10

FIELD NO:	184	185	186	187		
LAB NO:	489	490	491	492		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	97%	87%		
20.0	100%	98%	91%	83%		
12.5	100%	94%	89%	79%		
10.0	100%	91%	88%	76%		
5.0	100%	82%	81%	69%		
2.5	100%	74%	74%	63%		
1.25	99%	68%	68%	57%		
0.630	99%	62%	62%	53%		
0.315	98%	57%	57%	49%		
0.160	97%	51%	50%	43%		
0.080	95%	44%	44%	37%		
M.C.(%):	36%	10%	10%	8%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	18	19	31		
% SAND:	4	39	37	32		
% FINES:	95	44	44	37		
CLASSIFICATION	SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		



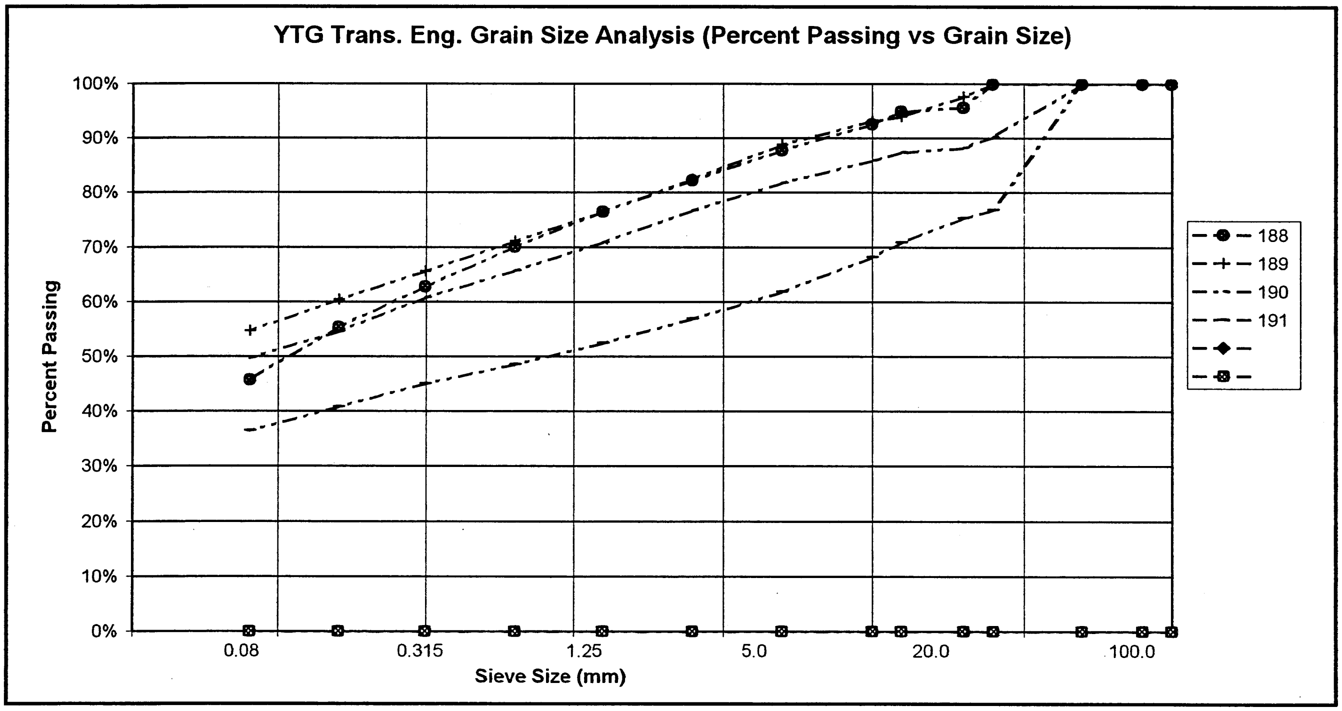
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1745+000 12M RT
LOGGED BY: G.C.

HOLE No.: 543-1341

DATE COMP: 2000/05/10

FIELD NO:	188	189	190	191		
LAB NO:	493	494	495	496		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	90%	77%		
20.0	96%	98%	88%	75%		
12.5	95%	94%	87%	71%		
10.0	93%	93%	86%	68%		
5.0	88%	89%	82%	62%		
2.5	82%	83%	77%	57%		
1.25	76%	77%	71%	52%		
0.630	70%	71%	66%	49%		
0.315	63%	66%	61%	45%		
0.160	55%	60%	55%	41%		
0.080	46%	55%	50%	37%		
M.C.(%):	11%	9%	7%	14%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	12	11	18	38		
% SAND:	42	34	32	25		
% FINES:	46	55	50	37		
CLASSIFICATION	SILTY SAND (SM)	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)		

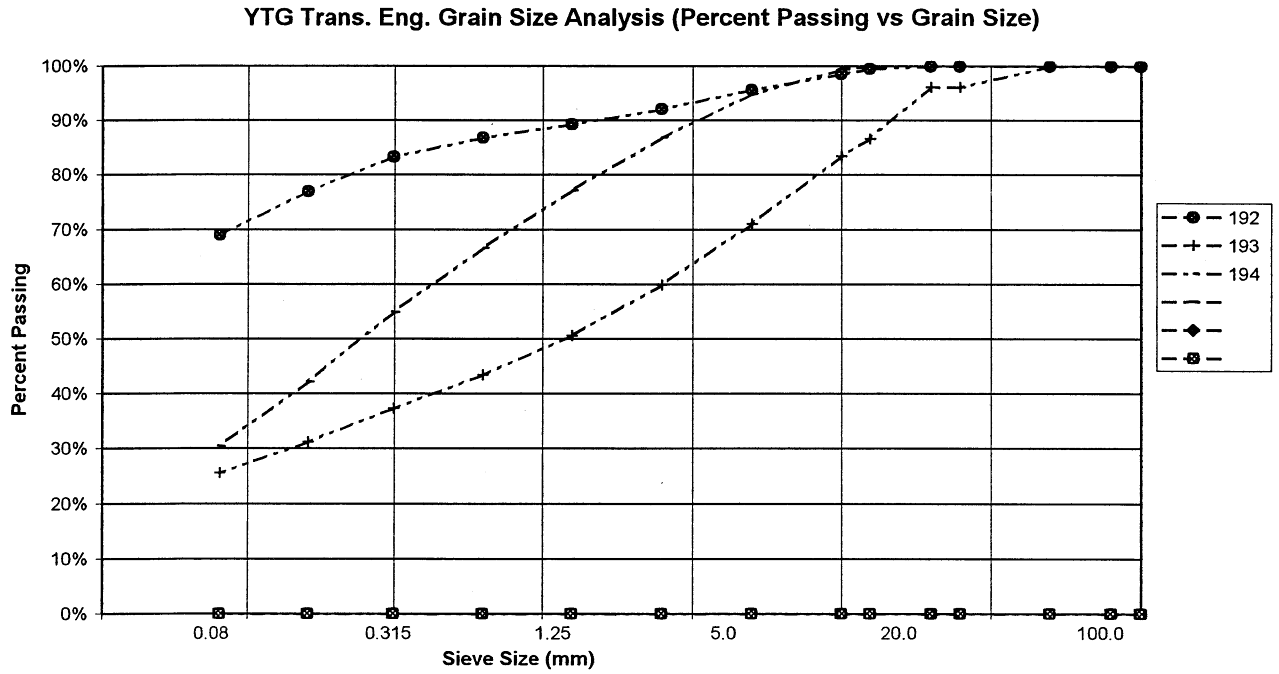


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1745+150 20M RT
LOGGED BY: G.C.

HOLE No.: 543-1342

DATE COMP: 2000/05/10

FIELD NO:	192	193	194			
LAB NO:	497	498	499			
DEPTH:	1.3-1.5	2.8-3.0	4.4-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	96%	100%			
20.0	100%	96%	100%			
12.5	100%	87%	100%			
10.0	99%	83%	99%			
5.0	96%	71%	95%			
2.5	92%	60%	87%			
1.25	89%	51%	77%			
0.630	87%	43%	67%			
0.315	83%	37%	55%			
0.160	77%	31%	42%			
0.080	69%	26%	30%			
M.C.(%):	24%	11%	13%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	4	29	5			
% SAND:	27	45	64			
% FINES:	69	26	30			
CLASSIFICATION	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)			



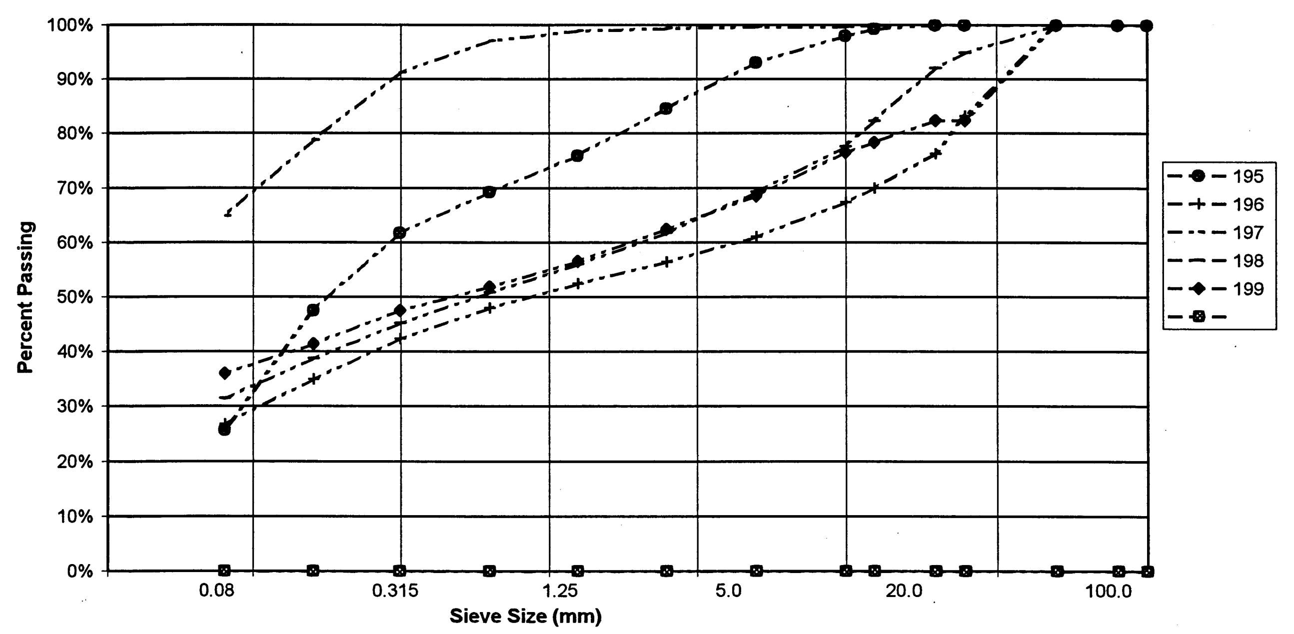
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1745+250 12M RT
LOGGED BY: G.C.

HOLE No.: 543-1343

DATE COMP: 2000/05/10

FIELD NO:	195	196	197	198	199	
LAB NO:	500	501	502	503	504	
DEPTH:	0.8-1.0	1.8-2.0	2.2-2.4	3.6-4.0	4.4-4.7	
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	
100.0	100%	100%	100%	100%	100%	
80.0	100%	100%	100%	100%	100%	
50.0	100%	100%	100%	100%	100%	
25.0	100%	83%	100%	95%	82%	
20.0	100%	76%	100%	92%	82%	
12.5	99%	70%	100%	82%	78%	
10.0	98%	67%	100%	78%	77%	
5.0	93%	61%	100%	69%	69%	
2.5	85%	56%	99%	62%	62%	
1.25	76%	52%	99%	56%	57%	
0.630	69%	48%	97%	51%	52%	
0.315	62%	42%	91%	45%	48%	
0.160	48%	35%	79%	39%	41%	
0.080	26%	27%	65%	31%	36%	
M.C.(%):	14%	10%	25%	12%	12%	
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	
% GRAVEL:	7	39	0	31	31	
% SAND:	67	34	35	38	32	
% FINES:	26	27	65	31	36	
CLASSIFICATION	SILTY SAND (SM)	SILTY GRAVEL WITH SAND (GM)	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

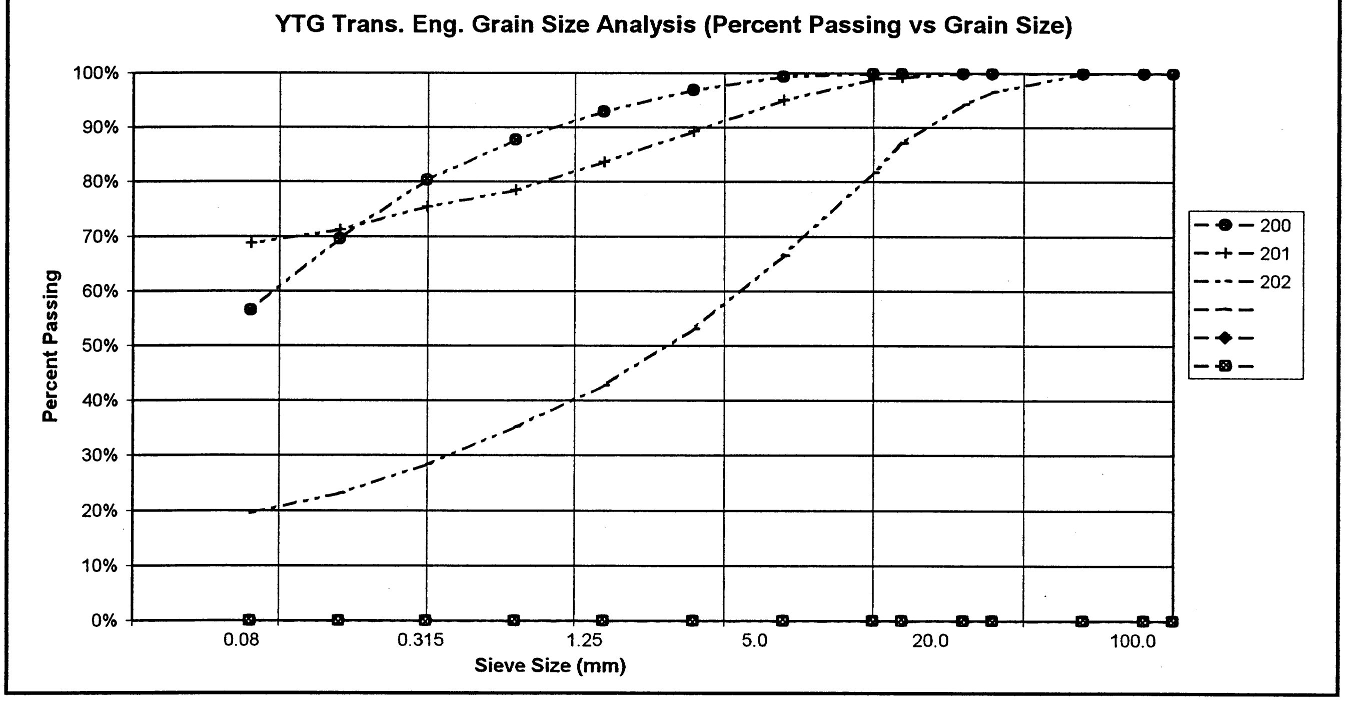


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1746+200 cl
LOGGED BY: G.C.

HOLE No.: 543-1344

DATE COMP: 2000/05/10

FIELD NO:	200	201	202			
LAB NO:	505	506	507			
DEPTH:	1.2-1.5	2.6-3.0	3.8-4.0			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	97%			
20.0	100%	100%	94%			
12.5	100%	99%	87%			
10.0	100%	99%	82%			
5.0	99%	95%	66%			
2.5	97%	89%	53%			
1.25	93%	84%	43%			
0.630	88%	79%	35%			
0.315	80%	76%	28%			
0.160	70%	71%	23%			
0.080	57%	69%	20%			
M.C.(%):	63%	23%	9%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	1	5	34			
% SAND:	43	26	47			
% FINES:	57	69	20			
CLASSIFICATION	SANDY SILT (ML)	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)			



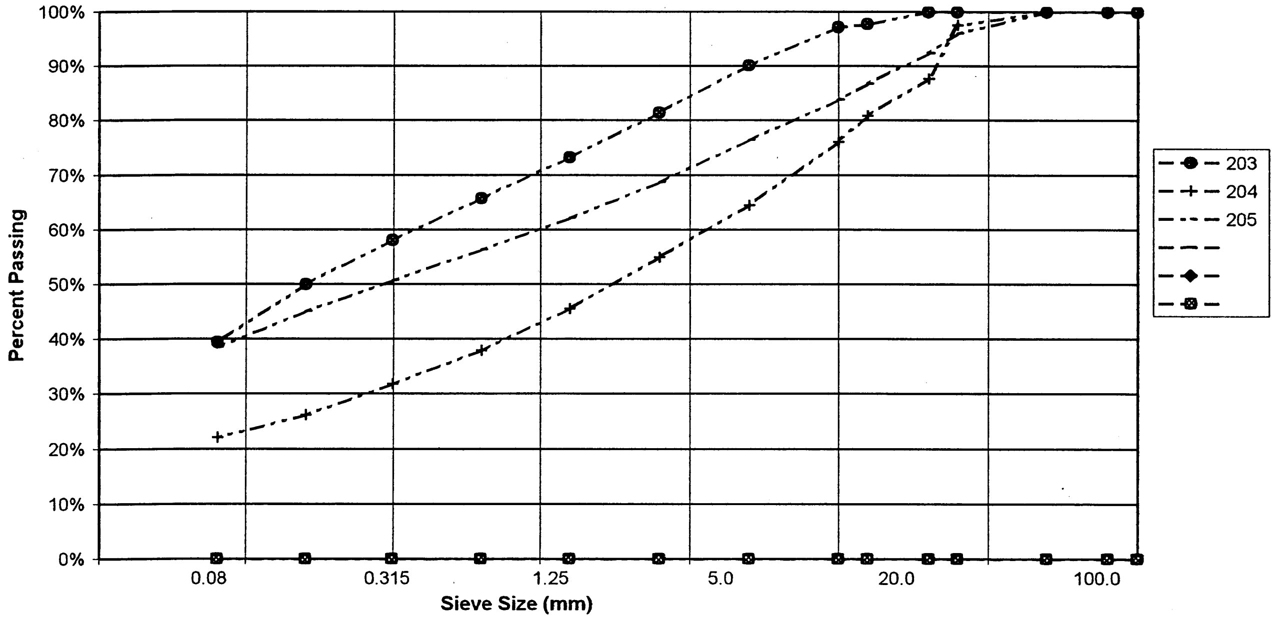
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1746+250 20M RT
LOGGED BY: G.C.

HOLE No.: 543-1345

DATE COMP: 2000/05/10

FIELD NO:	203	204	205			
LAB NO:	508	509	510			
DEPTH:	1.0-1.5	2.5-3.0	4.4-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	98%	96%			
20.0	100%	88%	92%			
12.5	98%	81%	87%			
10.0	97%	76%	84%			
5.0	90%	64%	76%			
2.5	81%	55%	69%			
1.25	73%	45%	62%			
0.630	66%	38%	56%			
0.315	58%	32%	51%			
0.160	50%	26%	45%			
0.080	39%	22%	38%			
M.C.(%):	15%	9%	13%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	10	36	24			
% SAND:	51	42	38			
% FINES:	39	22	38			
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

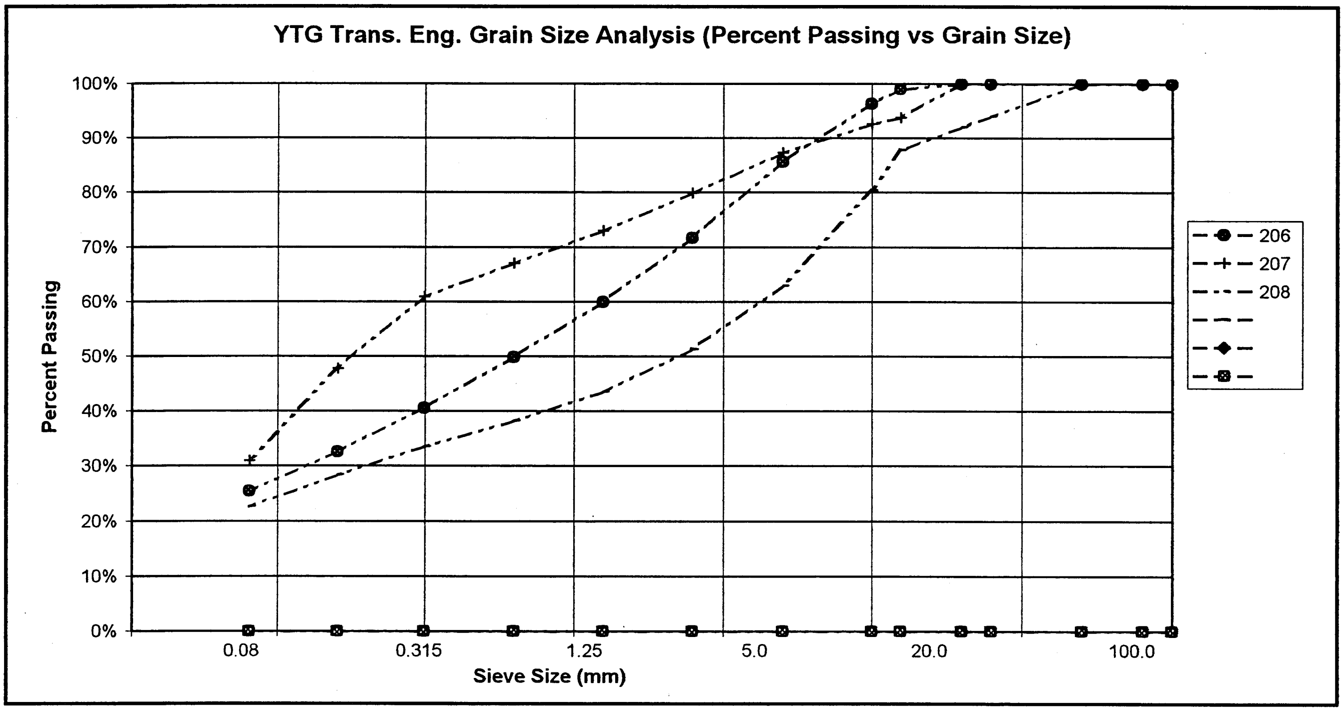


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1746+250 15M LT
LOGGED BY: G.C.

HOLE No.: 543-1346

DATE COMP: 2000/05/10

FIELD NO:	206	207	208			
LAB NO:	511	512	513			
DEPTH:	1.0-1.5	1.8-2.0	2.8-3.0			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	94%			
20.0	100%	100%	92%			
12.5	99%	94%	88%			
10.0	96%	93%	80%			
5.0	86%	87%	63%			
2.5	72%	80%	51%			
1.25	60%	73%	44%			
0.630	50%	67%	38%			
0.315	41%	61%	34%			
0.160	33%	48%	28%			
0.080	25%	31%	23%			
M.C.(%):	21%	27%	25%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	14	13	37			
% SAND:	60	56	40			
% FINES:	25	31	23			
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)			



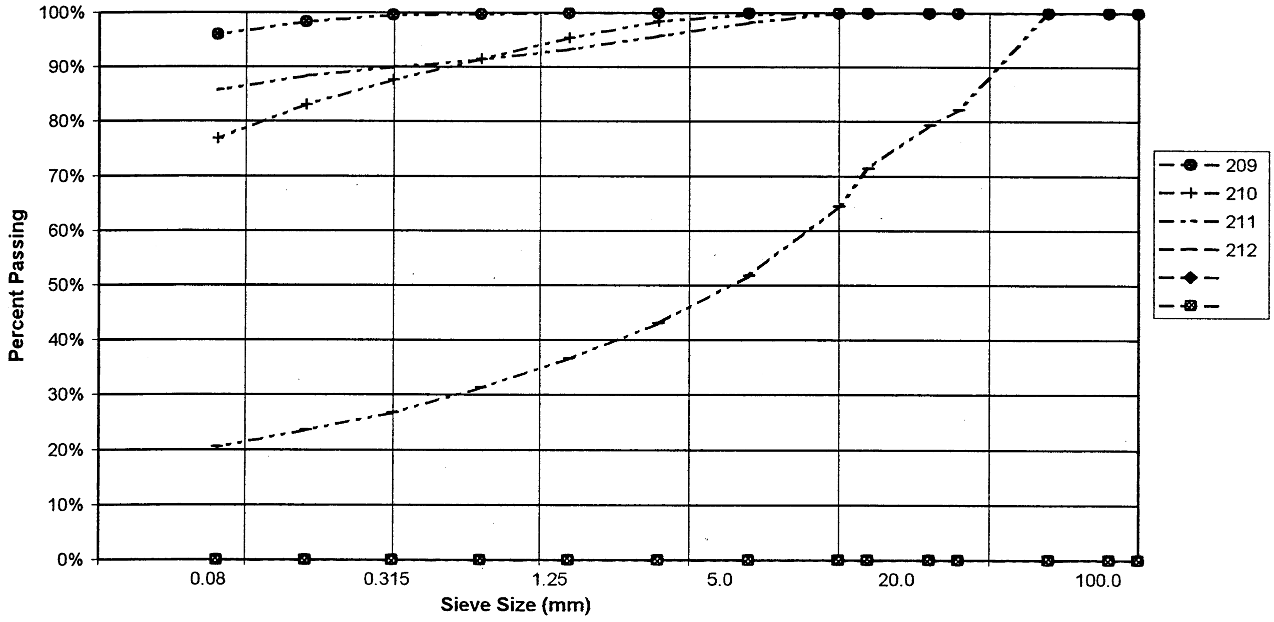
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1746+350 CL
LOGGED BY: G.C.

HOLE No.: 543-1347

DATE COMP: 2000/05/10

FIELD NO:	209	210	211	212		
LAB NO:	514	515	516	517		
DEPTH:	1.0-1.5	1.8-2.0	2.8-3.0	3.8-4.0		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	82%		
20.0	100%	100%	100%	79%		
12.5	100%	100%	100%	71%		
10.0	100%	100%	100%	64%		
5.0	100%	100%	98%	52%		
2.5	100%	98%	96%	43%		
1.25	100%	95%	93%	37%		
0.630	100%	92%	91%	31%		
0.315	100%	88%	90%	27%		
0.160	98%	83%	88%	24%		
0.080	96%	77%	86%	21%		
M.C.(%):	72%	36%	51%	13%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	0	2	48		
% SAND:	4	23	12	31		
% FINES:	96	77	86	21		
CLASSIFICATION	SILT (ML)	SILT WITH SAND (ML)	SILT (ML)	SILTY GRAVEL WITH SAND (GM)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

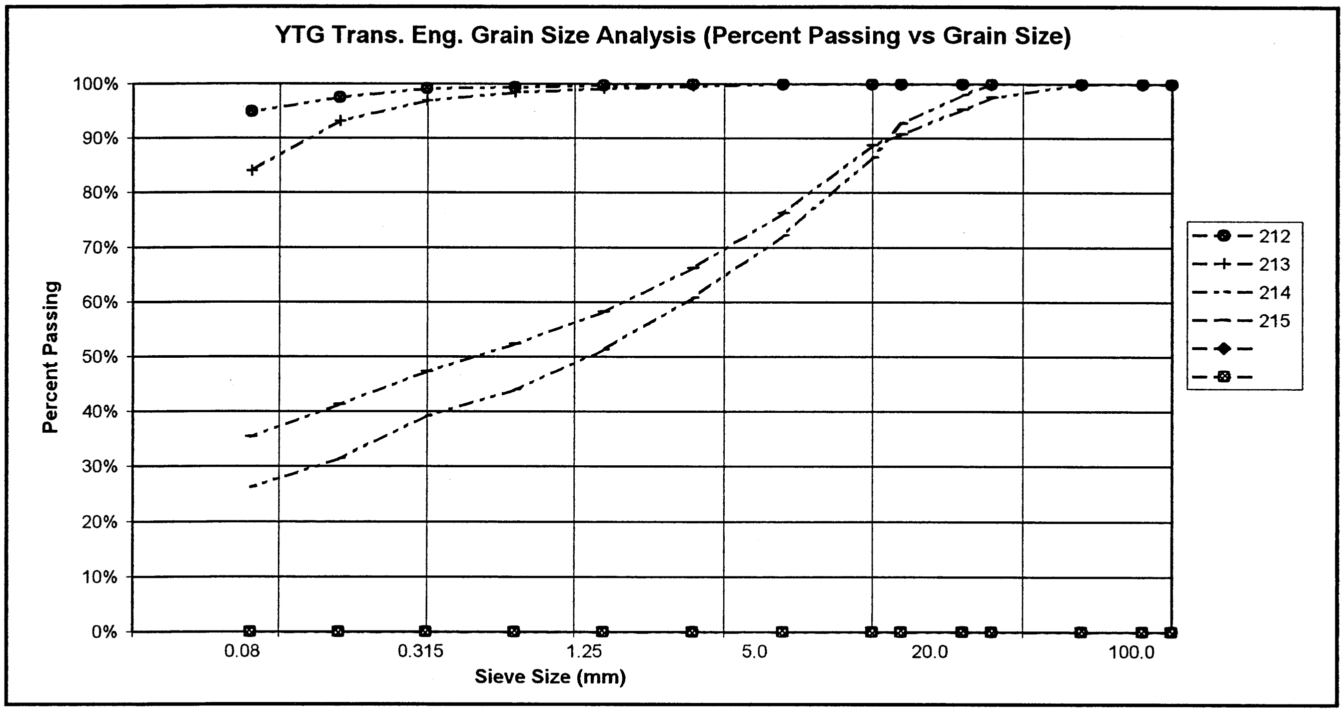


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1746+450 CL
LOGGED BY: G.C.

HOLE No.: 543-1348

DATE COMP: 2000/05/10

FIELD NO:	212	213	214	215		
LAB NO:	518	519	520	521		
DEPTH:	1.3-1.5	2.8-3.0	3.0-3.5	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	98%		
20.0	100%	100%	98%	95%		
12.5	100%	100%	93%	91%		
10.0	100%	100%	86%	89%		
5.0	100%	100%	72%	76%		
2.5	100%	100%	61%	66%		
1.25	100%	99%	51%	58%		
0.630	99%	98%	44%	52%		
0.315	99%	97%	39%	47%		
0.160	98%	93%	31%	41%		
0.080	95%	84%	26%	35%		
M.C.(%):	46%	45%	10%	12%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	0	28	24		
% SAND:	5	16	46	41		
% FINES:	95	84	26	35		
CLASSIFICATION	SILT (ML)	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		



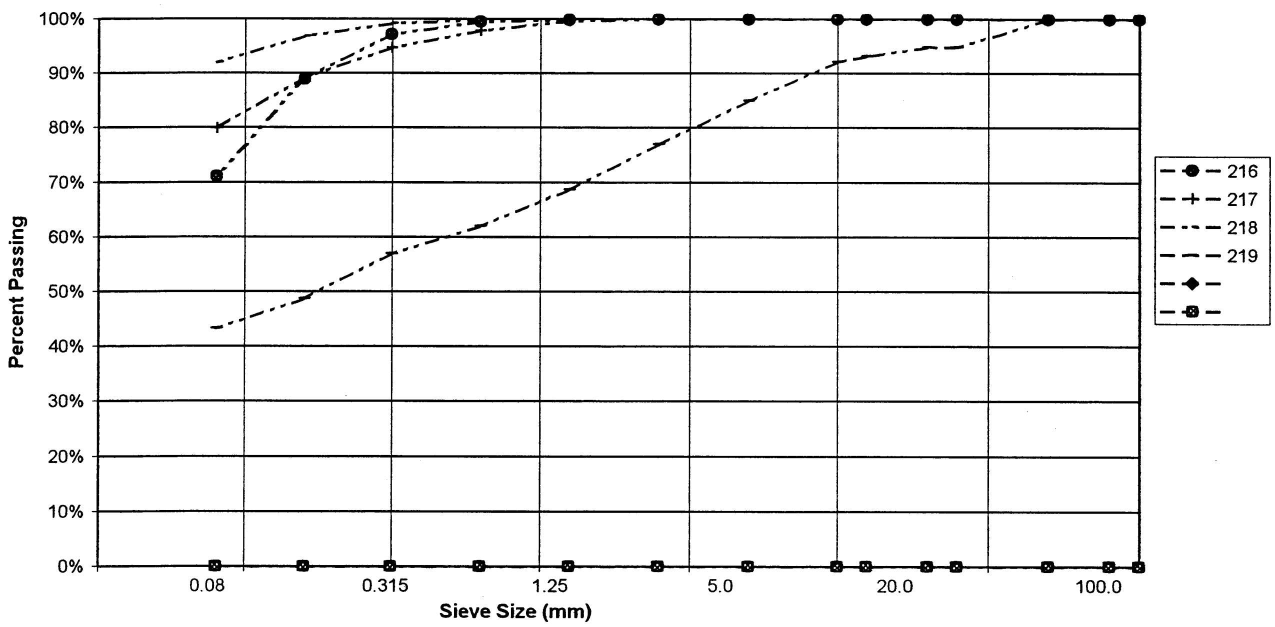
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1746+550 15M LT
LOGGED BY: G.C.

HOLE No.: 543-1349

DATE COMP: 2000/05/10

FIELD NO:	216	217	218	219		
LAB NO:	522	523	524	525		
DEPTH:	1.6-1.8	2.5-2.7	3.0-3.2	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	95%		
20.0	100%	100%	100%	95%		
12.5	100%	100%	100%	93%		
10.0	100%	100%	100%	92%		
5.0	100%	100%	100%	85%		
2.5	100%	100%	100%	77%		
1.25	100%	100%	100%	69%		
0.630	100%	98%	100%	62%		
0.315	97%	95%	99%	57%		
0.160	89%	89%	97%	49%		
0.080	71%	80%	92%	43%		
M.C.(%):	32%	37%	57%	15%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	0	0	15		
% SAND:	29	20	8	42		
% FINES:	71	80	92	43		
CLASSIFICATION	SILT WITH SAND (ML)	SILT WITH SAND (ML)	SILT (ML)	SILTY SAND WITH GRAVEL (SM)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

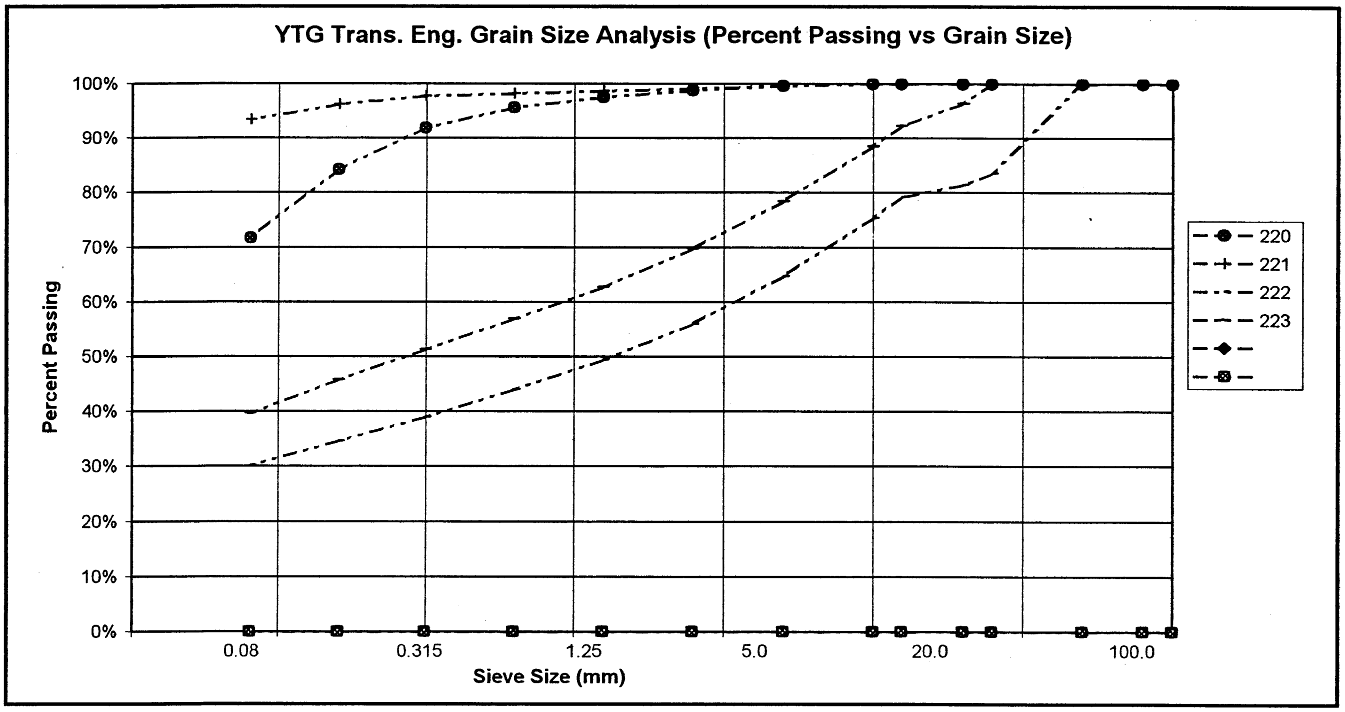


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1746+550 10M RT
LOGGED BY: G.C.

HOLE No.: 543-1350

DATE COMP: 2000/05/10

FIELD NO:	220	221	222	223		
LAB NO:	526	527	528	529		
DEPTH:	1.0-1.5	2.2-2.5	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	84%	100%		
20.0	100%	100%	81%	96%		
12.5	100%	100%	79%	92%		
10.0	100%	100%	75%	89%		
5.0	100%	100%	65%	78%		
2.5	99%	99%	56%	70%		
1.25	98%	99%	49%	63%		
0.630	96%	98%	44%	57%		
0.315	92%	98%	39%	51%		
0.160	84%	96%	35%	46%		
0.080	72%	93%	30%	40%		
M.C.(%):	40%	77%	13%	13%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	0	35	22		
% SAND:	28	6	35	39		
% FINES:	72	93	30	40		
CLASSIFICATION	SILT WITH SAND (ML)	SILT (ML)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)		



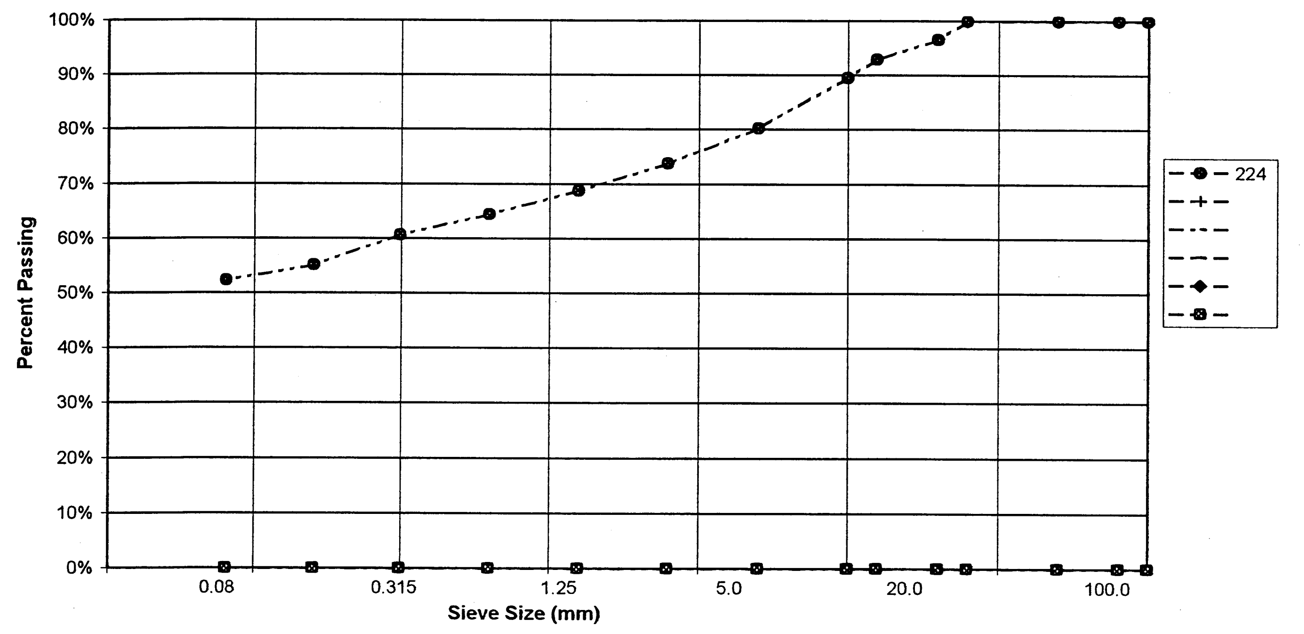
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1746+650 20M LT
LOGGED BY: G.C.

HOLE No.: 543-1351

DATE COMP: 2000/05/10

FIELD NO:	224					
LAB NO:	530					
DEPTH:	1.0-1.4					
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**					
100.0	100%					
80.0	100%					
50.0	100%					
25.0	100%					
20.0	97%					
12.5	93%					
10.0	90%					
5.0	80%					
2.5	74%					
1.25	69%					
0.630	64%					
0.315	61%					
0.160	55%					
0.080	52%					
M.C.(%):	40%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	20					
% SAND:	28					
% FINES:	52					
CLASSIFICATION	SANDY SILT WITH GRAVEL (ML)					

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



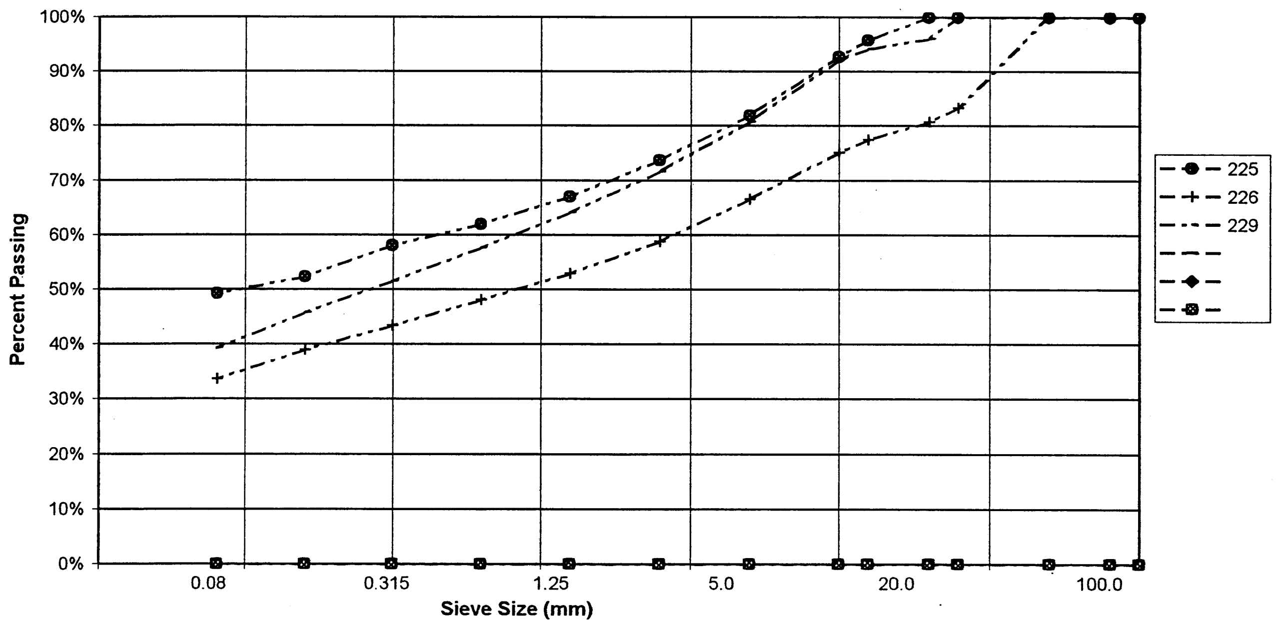
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1746+500 5M LT
LOGGED BY: G.C.

HOLE No.: 543-1352

DATE COMP: 2000/05/10

FIELD NO:	225	226	229			
LAB NO:	531	532	533			
DEPTH:	1.0-1.4	2.5-3.0	3.5-3.8			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	83%	100%			
20.0	100%	81%	96%			
12.5	96%	77%	94%			
10.0	93%	75%	92%			
5.0	82%	67%	81%			
2.5	74%	59%	72%			
1.25	67%	53%	64%			
0.630	62%	48%	58%			
0.315	58%	43%	52%			
0.160	52%	39%	46%			
0.080	49%	34%	39%			
M.C.(%):	15%	11%	11%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	18	33	19			
% SAND:	33	33	41			
% FINES:	49	34	39			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)			

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



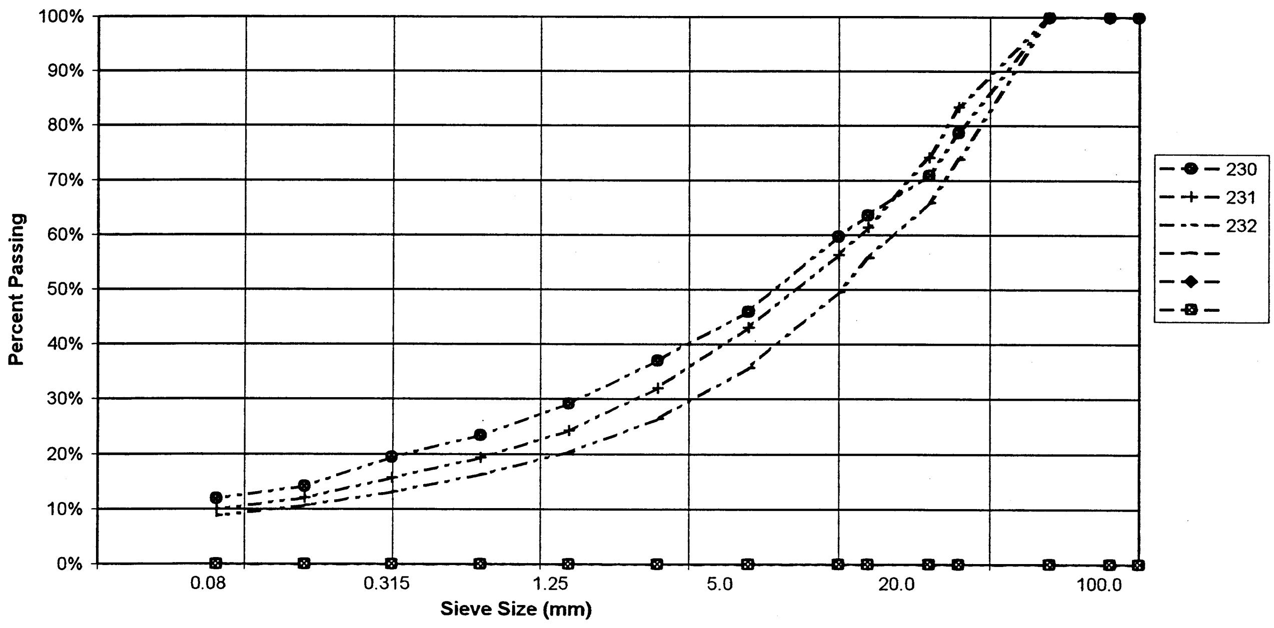
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1746+750 15M LT
LOGGED BY: G.C.

HOLE No.: 543-1353

DATE COMP: 2000/05/10

FIELD NO:	230	231	232			
LAB NO:	534	535	536			
DEPTH:	1.3-1.5	2.5-3.0	3.5-4.0			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	79%	83%	74%			
20.0	71%	74%	66%			
12.5	64%	61%	56%			
10.0	60%	56%	49%			
5.0	46%	43%	36%			
2.5	37%	32%	26%			
1.25	29%	24%	20%			
0.630	23%	19%	16%			
0.315	20%	16%	13%			
0.160	14%	12%	11%			
0.080	12%	10%	9%			
M.C.(%):	5%	6%	3%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	54	57	64			
% SAND:	34	33	27			
% FINES:	12	10	9			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)			

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



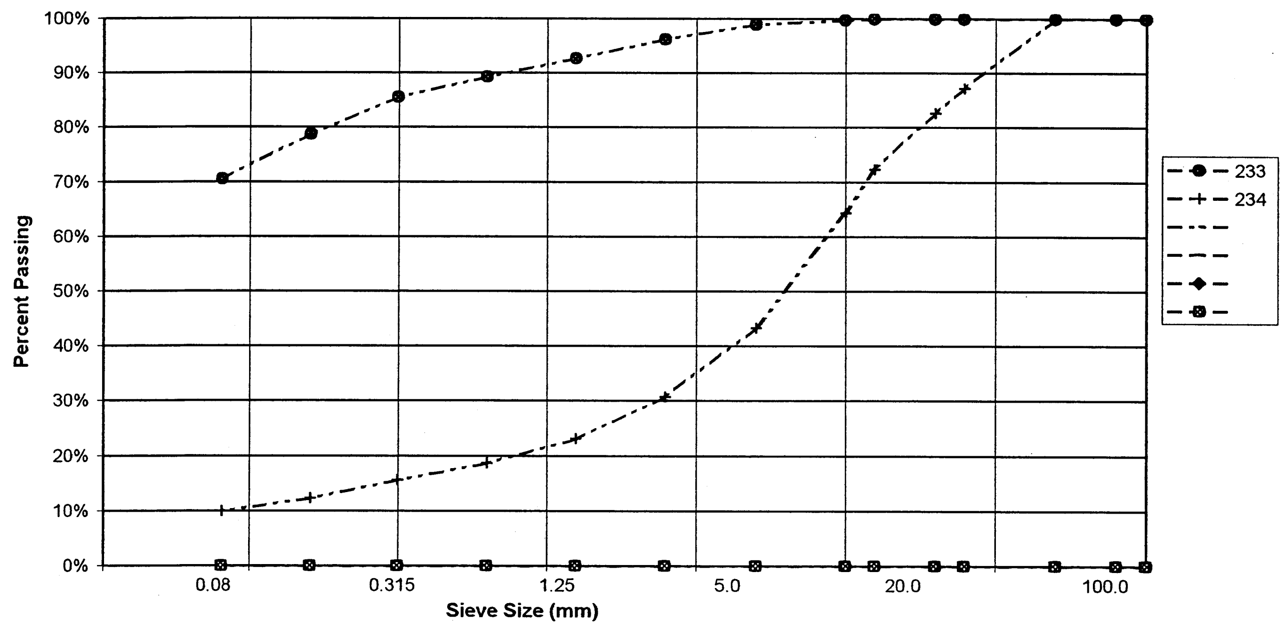
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1746+750 15M RT
LOGGED BY: G.C.

HOLE No.: 543-1354

DATE COMP: 2000/05/10

FIELD NO:	233	234				
LAB NO:	537	538				
DEPTH:	0.8-1.0	2.5-3.0				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	87%				
20.0	100%	83%				
12.5	100%	72%				
10.0	100%	64%				
5.0	99%	43%				
2.5	96%	31%				
1.25	93%	23%				
0.630	89%	19%				
0.315	86%	16%				
0.160	79%	12%				
0.080	71%	10%				
M.C.(%):	17%	3%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	1	57				
% SAND:	28	33				
% FINES:	71	10				
CLASSIFICATION	SILT WITH SAND (ML)	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)				

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

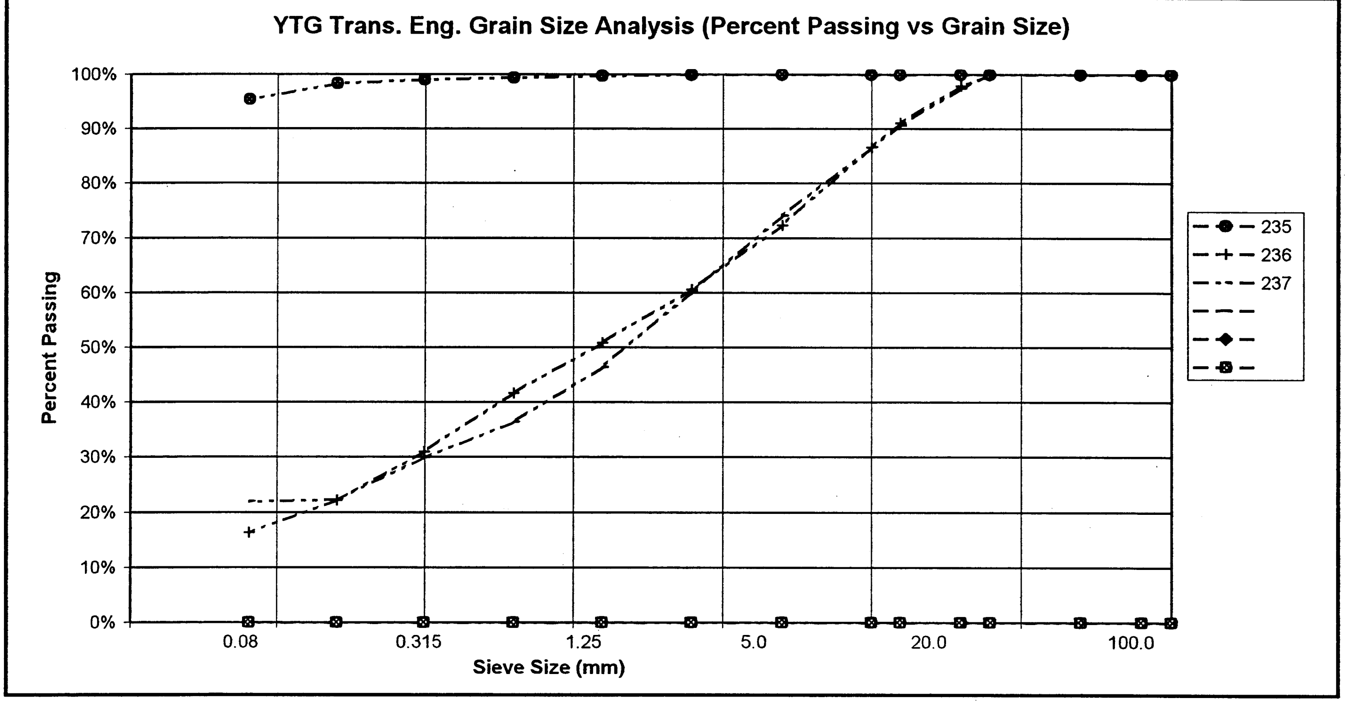


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1746+850 CL
LOGGED BY: G.C.

HOLE No.: 543-1355

DATE COMP: 2000/05/10

FIELD NO:	235	236	237			
LAB NO:	539	540	541			
DEPTH:	1.3-1.5	2.8-3.0	3.5-3.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	100%	98%	97%			
12.5	100%	91%	91%			
10.0	100%	87%	87%			
5.0	100%	72%	74%			
2.5	100%	61%	60%			
1.25	100%	51%	46%			
0.630	99%	42%	36%			
0.315	99%	31%	30%			
0.160	98%	22%	22%			
0.080	95%	16%	22%			
M.C.(%):	74%	13%	12%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	0	28	26			
% SAND:	4	56	52			
% FINES:	95	16	22			
CLASSIFICATION	SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			

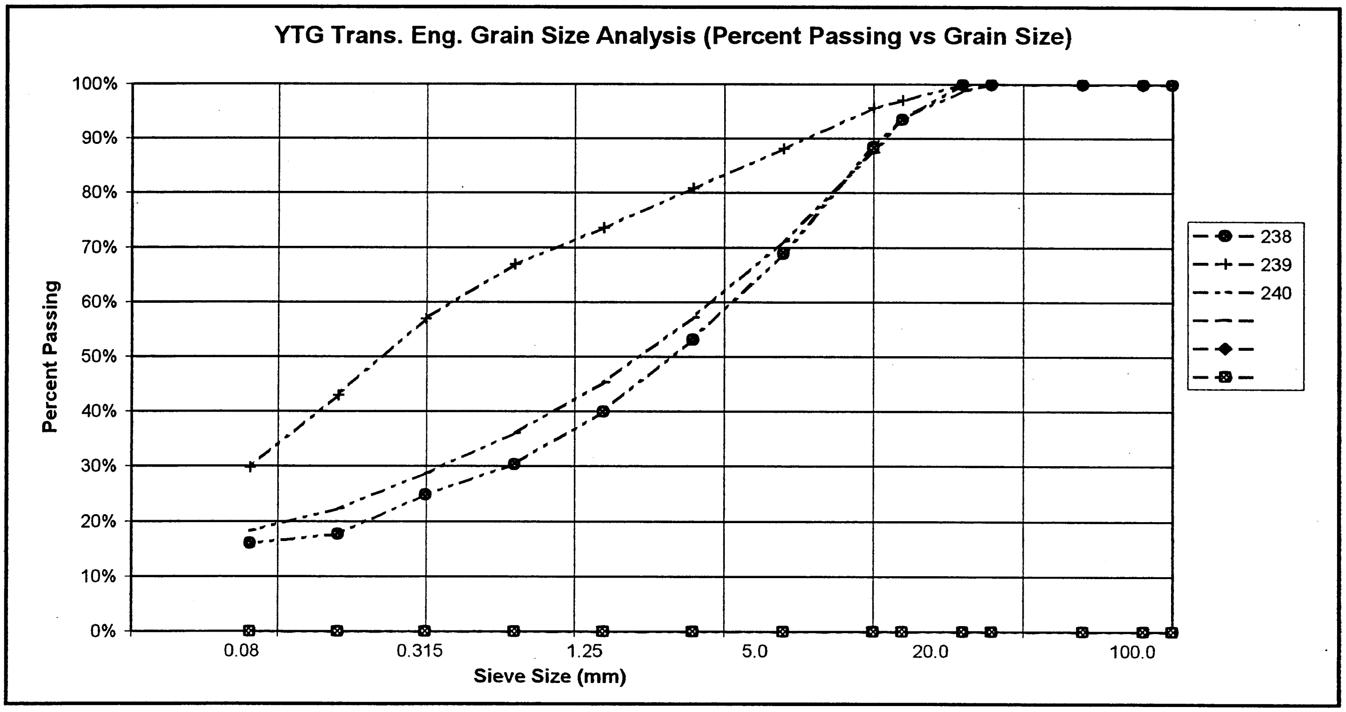


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1747+000 CL
LOGGED BY: G.C.

HOLE No.: 543-1356

DATE COMP: 2000/05/10

FIELD NO:	238	239	240			
LAB NO:	542	543	544			
DEPTH:	1.3-1.5	2.0-2.5	2.8-3.0			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	100%	100%	99%			
12.5	94%	97%	94%			
10.0	88%	96%	87%			
5.0	69%	88%	71%			
2.5	53%	81%	57%			
1.25	40%	74%	45%			
0.630	30%	67%	36%			
0.315	25%	57%	29%			
0.160	18%	43%	22%			
0.080	16%	30%	18%			
M.C.(%):	13%	20%	12%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	31	12	29			
% SAND:	53	58	53			
% FINES:	16	30	18			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)			

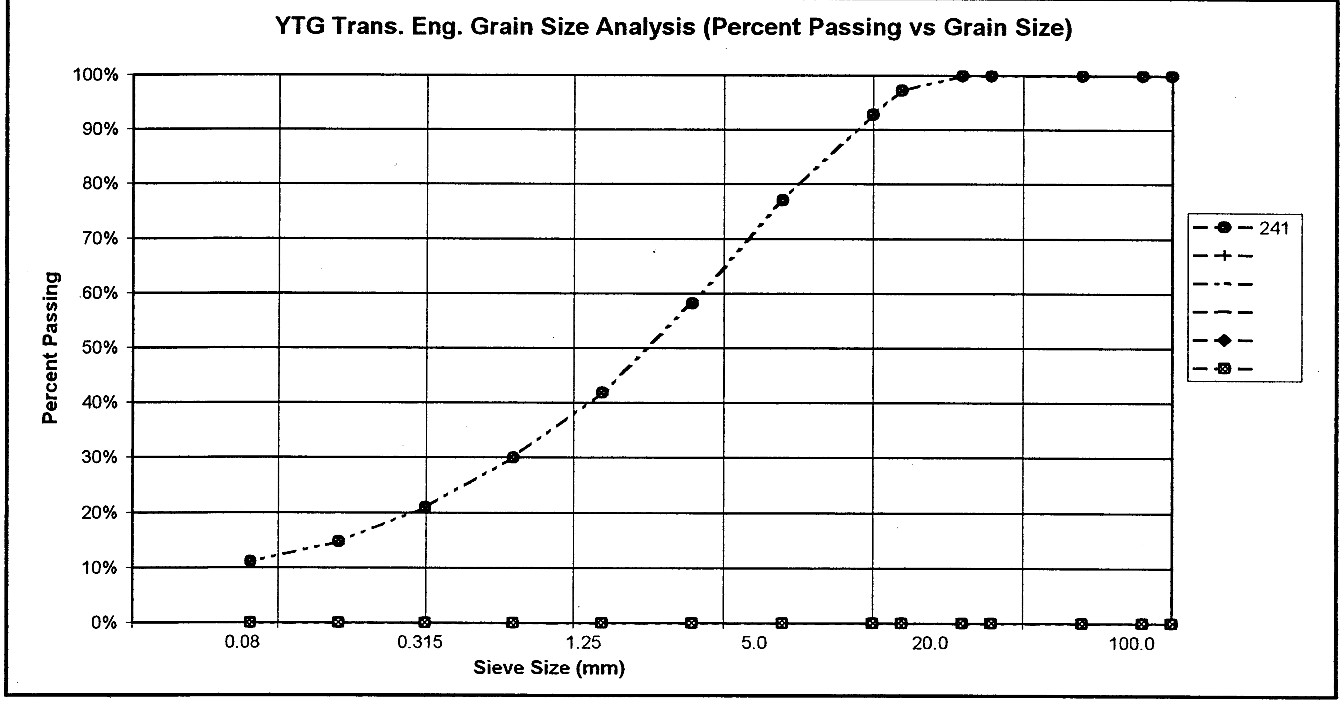


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1747+125 CL
LOGGED BY: G.C.

HOLE No.: 543-1357

DATE COMP: 2000/05/10

FIELD NO:	241					
LAB NO:	545					
DEPTH:	1.0-1.5					
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**					
100.0	100%					
80.0	100%					
50.0	100%					
25.0	100%					
20.0	100%					
12.5	97%					
10.0	93%					
5.0	77%					
2.5	58%					
1.25	42%					
0.630	30%					
0.315	21%					
0.160	15%					
0.080	11%					
M.C.(%):	8%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	23					
% SAND:	66					
% FINES:	11					
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)					



YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

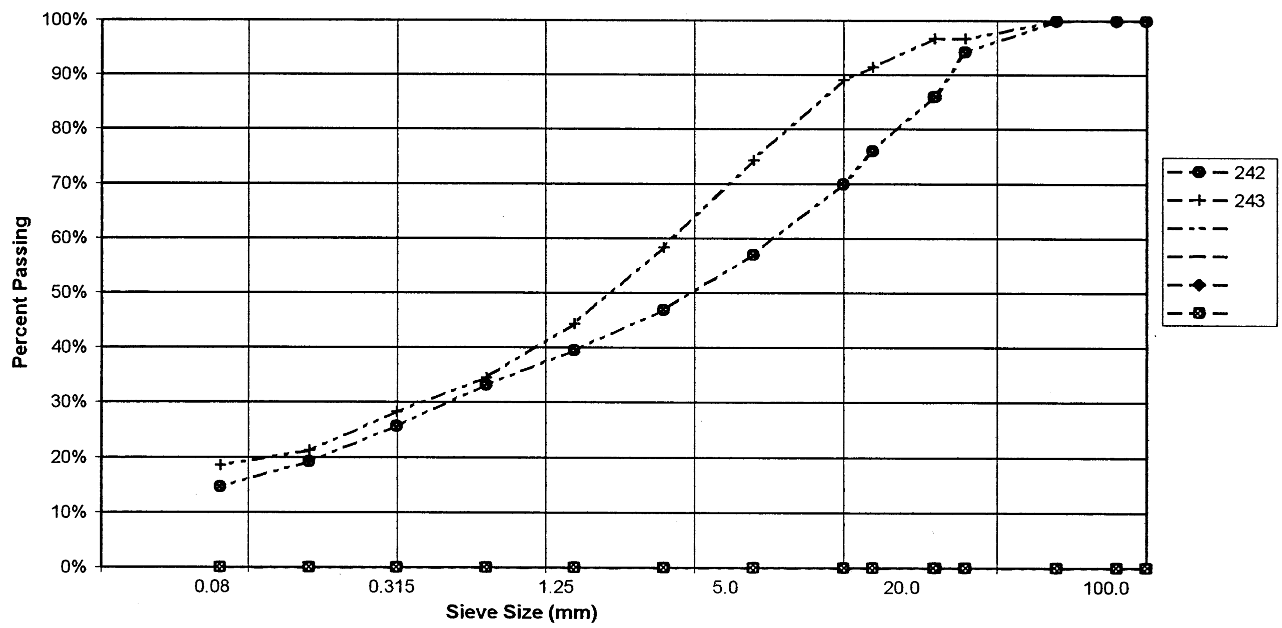
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1747+225 20M LT
LOGGED BY: G.C.

HOLE No.: 543-1358

DATE COMP: 2000/05/10

FIELD NO:	242	243				
LAB NO:	546	547				
DEPTH:	1.3-1.5	2.2-2.6				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	94%	97%				
20.0	86%	97%				
12.5	76%	91%				
10.0	70%	89%				
5.0	57%	74%				
2.5	47%	58%				
1.25	40%	44%				
0.630	33%	34%				
0.315	26%	28%				
0.160	19%	21%				
0.080	15%	19%				
M.C.(%):	12%	8%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	43	26				
% SAND:	42	56				
% FINES:	15	19				
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)				

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

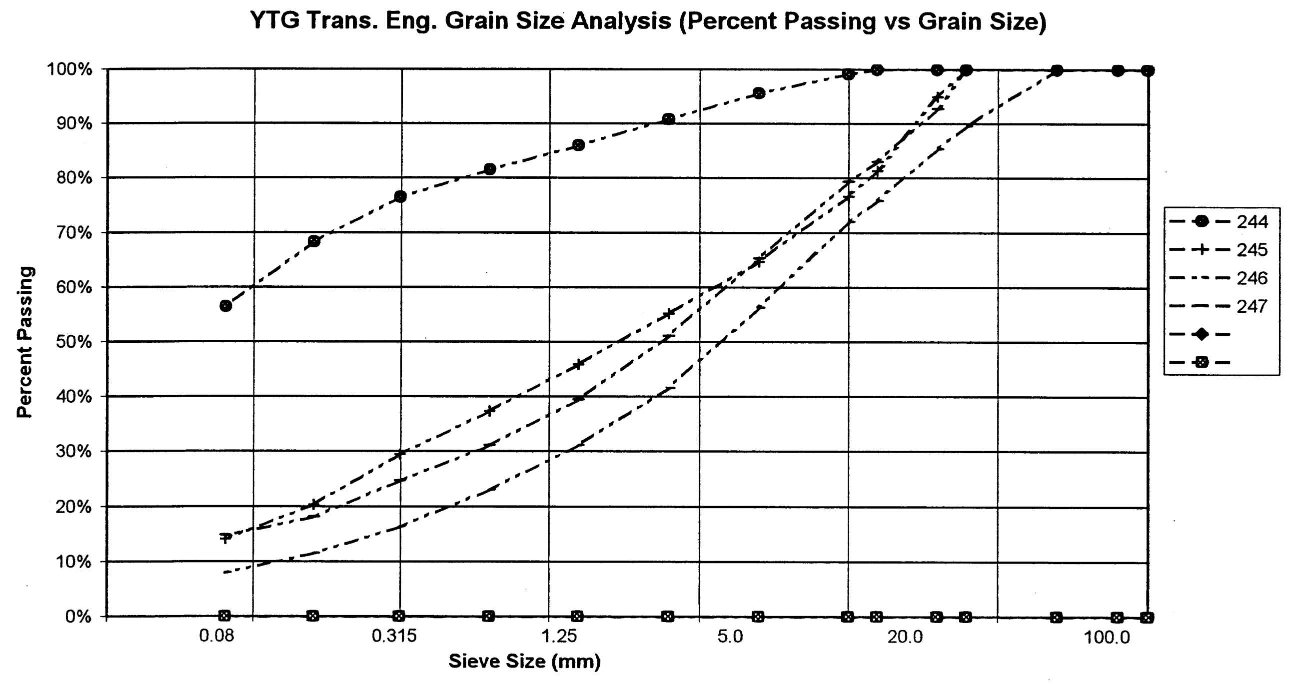


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1747+225 20M RT
LOGGED BY: G.C.

HOLE No.: 543-1359

DATE COMP: 2000/05/10

FIELD NO:	244	245	246	247		
LAB NO:	548	549	550	551		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	90%	100%		
20.0	100%	95%	85%	93%		
12.5	100%	81%	76%	83%		
10.0	99%	77%	72%	79%		
5.0	96%	65%	56%	65%		
2.5	91%	55%	42%	51%		
1.25	86%	46%	31%	39%		
0.630	82%	37%	23%	31%		
0.315	77%	30%	16%	25%		
0.160	68%	20%	11%	18%		
0.080	56%	14%	8%	15%		
M.C.(%):	19%	4%	2%	4%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	4	35	44	35		
% SAND:	39	51	48	50		
% FINES:	56	14	8	15		
CLASSIFICATION	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND WITH GRAVEL (SM)		

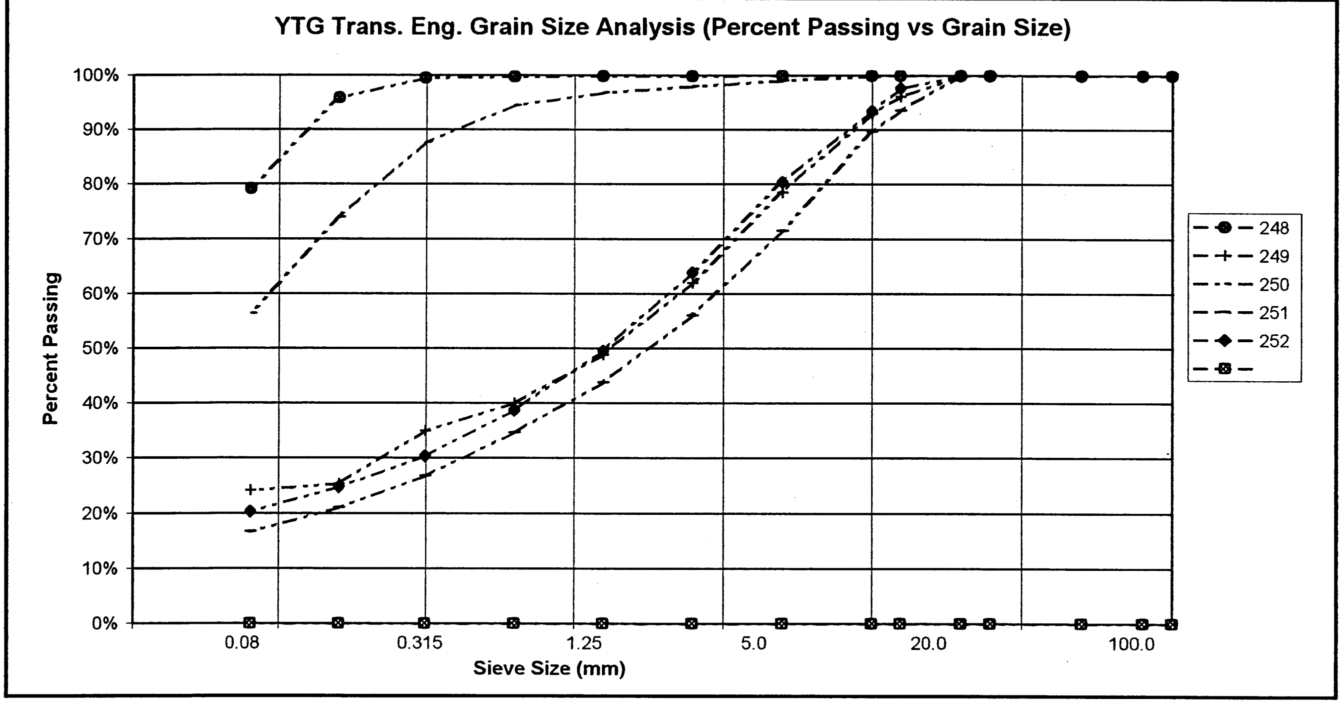


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1747+300 CL
LOGGED BY: G.C.

HOLE No.: 543-1360

DATE COMP: 2000/05/12

FIELD NO:	248	249	250	251	252	
LAB NO:	552	553	554	555	556	
DEPTH:	1.0-1.3	1.6-1.8	2.0-2.2	2.8-3.0	4.0-4.5	
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	
100.0	100%	100%	100%	100%	100%	
80.0	100%	100%	100%	100%	100%	
50.0	100%	100%	100%	100%	100%	
25.0	100%	100%	100%	100%	100%	
20.0	100%	100%	100%	100%	100%	
12.5	100%	96%	100%	94%	98%	
10.0	100%	93%	100%	90%	93%	
5.0	100%	78%	99%	71%	80%	
2.5	100%	62%	98%	56%	64%	
1.25	100%	49%	97%	44%	50%	
0.630	100%	40%	94%	35%	39%	
0.315	100%	35%	88%	27%	30%	
0.160	96%	25%	74%	21%	25%	
0.080	79%	24%	56%	17%	20%	
M.C.(%):	48%	11%	37%	12%	10%	
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	
% GRAVEL:	0	22	1	29	20	
% SAND:	21	54	43	55	60	
% FINES:	79	24	56	17	20	
CLASSIFICATION	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	



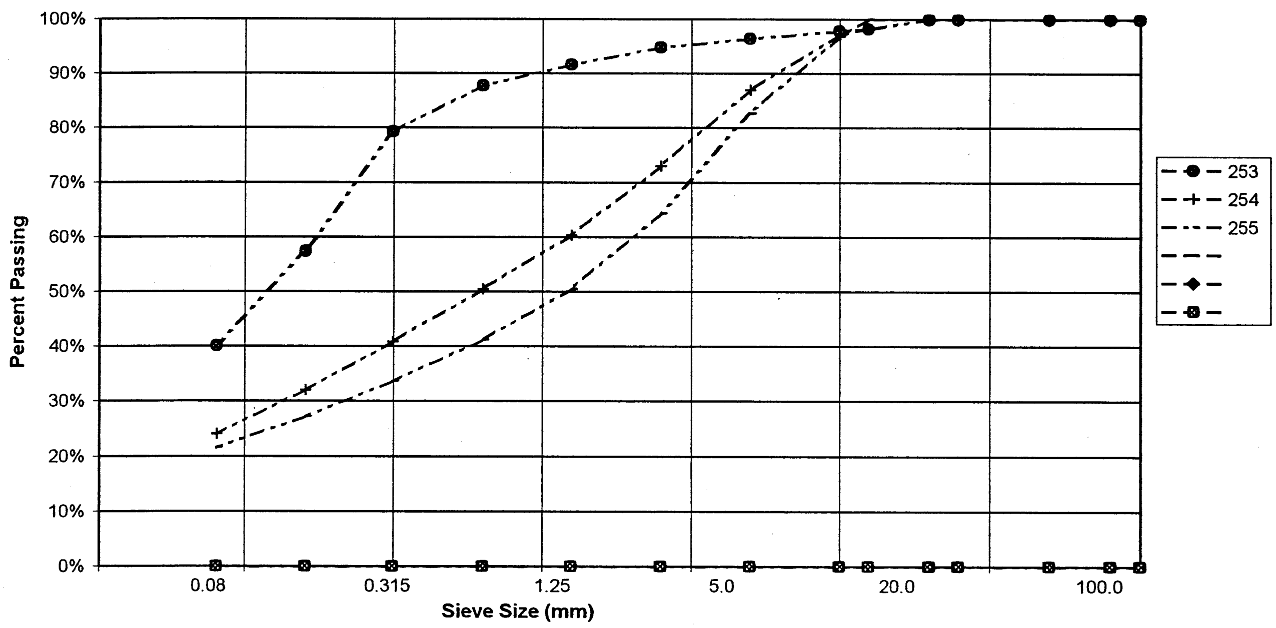
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1747+350 20M LT
LOGGED BY: G.C.

HOLE No.: 543-1361

DATE COMP: 2000/05/12

FIELD NO:	253	254	255			
LAB NO:	557	558	559			
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	100%	100%	100%			
12.5	98%	98%	100%			
10.0	98%	97%	97%			
5.0	96%	87%	83%			
2.5	95%	73%	64%			
1.25	92%	60%	50%			
0.630	88%	50%	41%			
0.315	79%	41%	34%			
0.160	57%	32%	27%			
0.080	40%	24%	22%			
M.C.(%):	18%	15%	14%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	4	13	17			
% SAND:	56	63	61			
% FINES:	40	24	22			
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)			

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

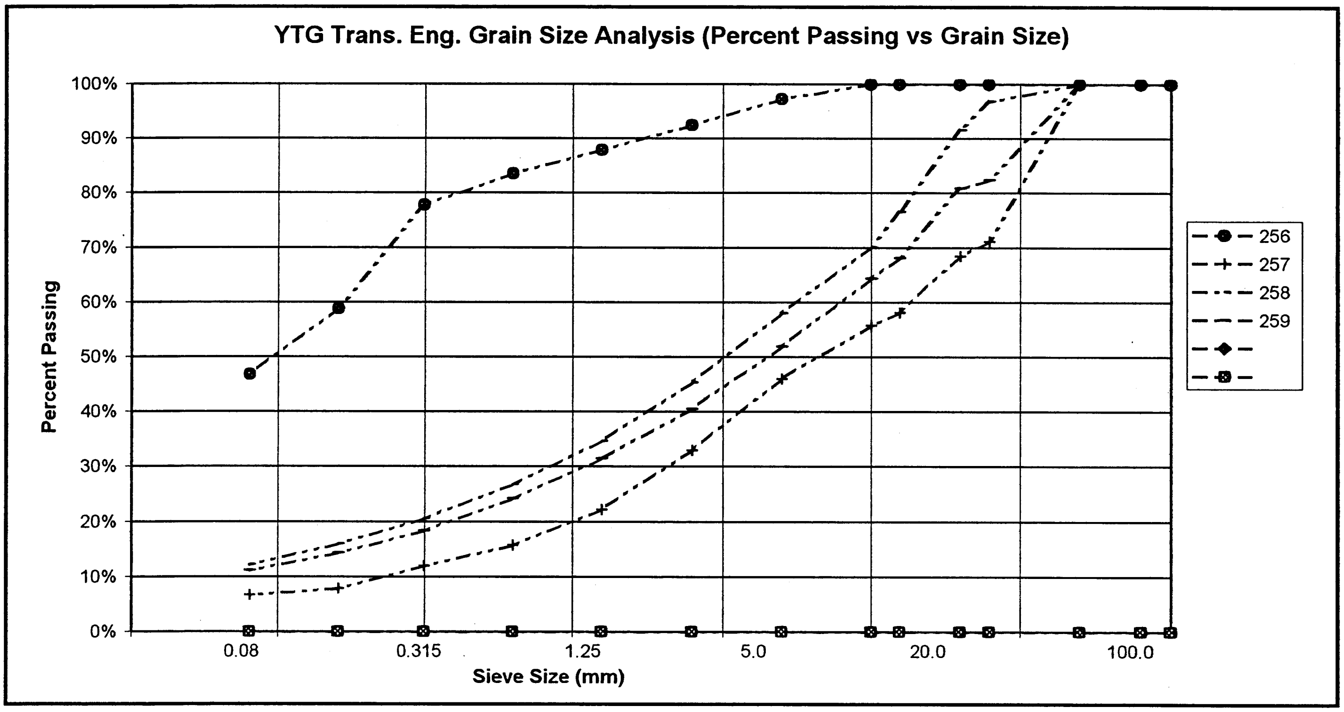


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1747+350 15M RT
LOGGED BY: G.C.

HOLE No.: 543-1362

DATE COMP: 2000/05/12

FIELD NO:	256	257	258	259		
LAB NO:	560	561	562	563		
DEPTH:	0.8-1.2	1.8-2.0	2.8-3.0	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	71%	97%	82%		
20.0	100%	68%	92%	81%		
12.5	100%	58%	77%	68%		
10.0	100%	56%	70%	64%		
5.0	97%	46%	58%	52%		
2.5	93%	33%	45%	41%		
1.25	88%	22%	35%	31%		
0.630	84%	16%	27%	24%		
0.315	78%	12%	21%	18%		
0.160	59%	8%	16%	14%		
0.080	47%	7%	12%	11%		
M.C.(%):	14%	3%	3%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	3	54	42	48		
% SAND:	50	39	46	41		
% FINES:	47	7	12	11		
CLASSIFICATION	SILTY SAND (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		



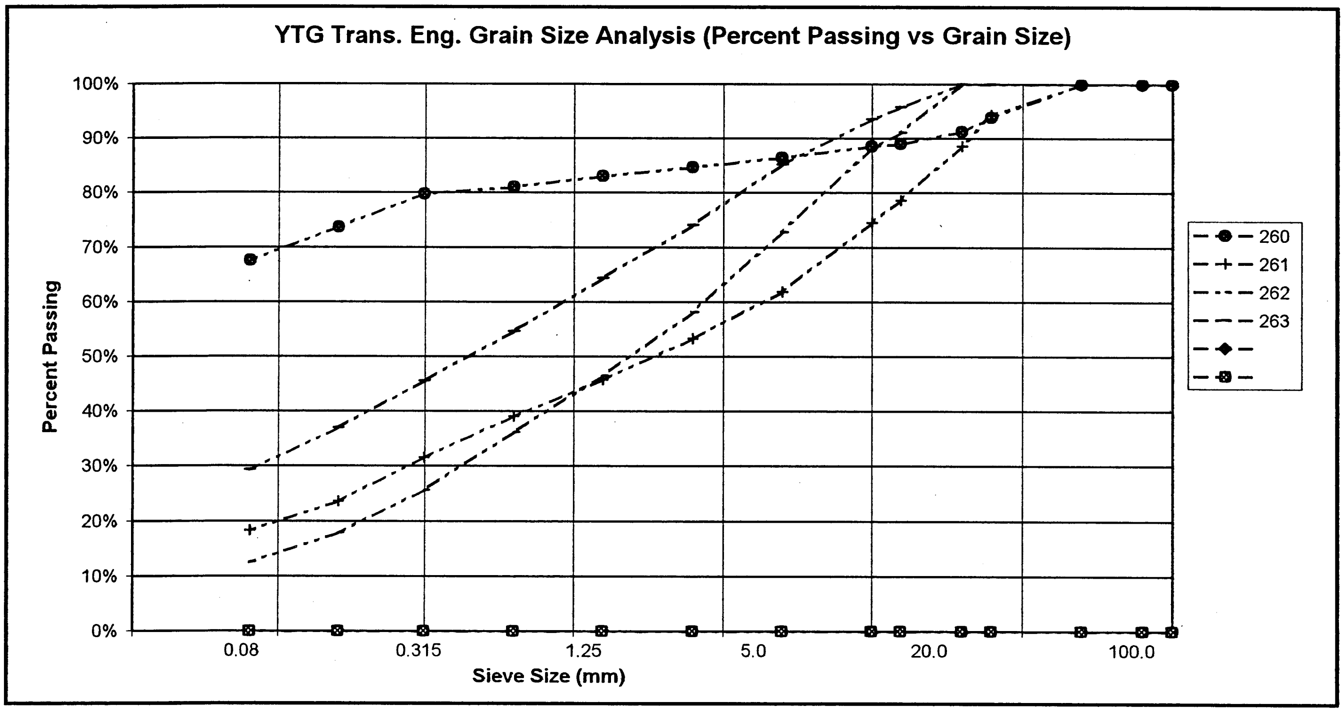
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1747+450 CL
LOGGED BY: G.C.

HOLE No.: 543-1363

DATE COMP: 2000/05/12

FIELD NO:	260	261	262	263		
LAB NO:	564	565	566	567		
DEPTH:	1.0-1.2	1.8-2.0	2.8-3.0	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	94%	94%	100%	100%		
20.0	91%	89%	100%	100%		
12.5	89%	79%	91%	96%		
10.0	89%	75%	88%	94%		
5.0	86%	62%	73%	85%		
2.5	85%	53%	58%	74%		
1.25	83%	46%	46%	64%		
0.630	81%	39%	36%	55%		
0.315	80%	32%	26%	45%		
0.160	74%	24%	18%	37%		
0.080	68%	18%	13%	29%		
M.C.(%):	7%	2%	2%	11%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	14	38	27	15		
% SAND:	19	44	60	56		
% FINES:	68	18	13	29		
CLASSIFICATION	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)		

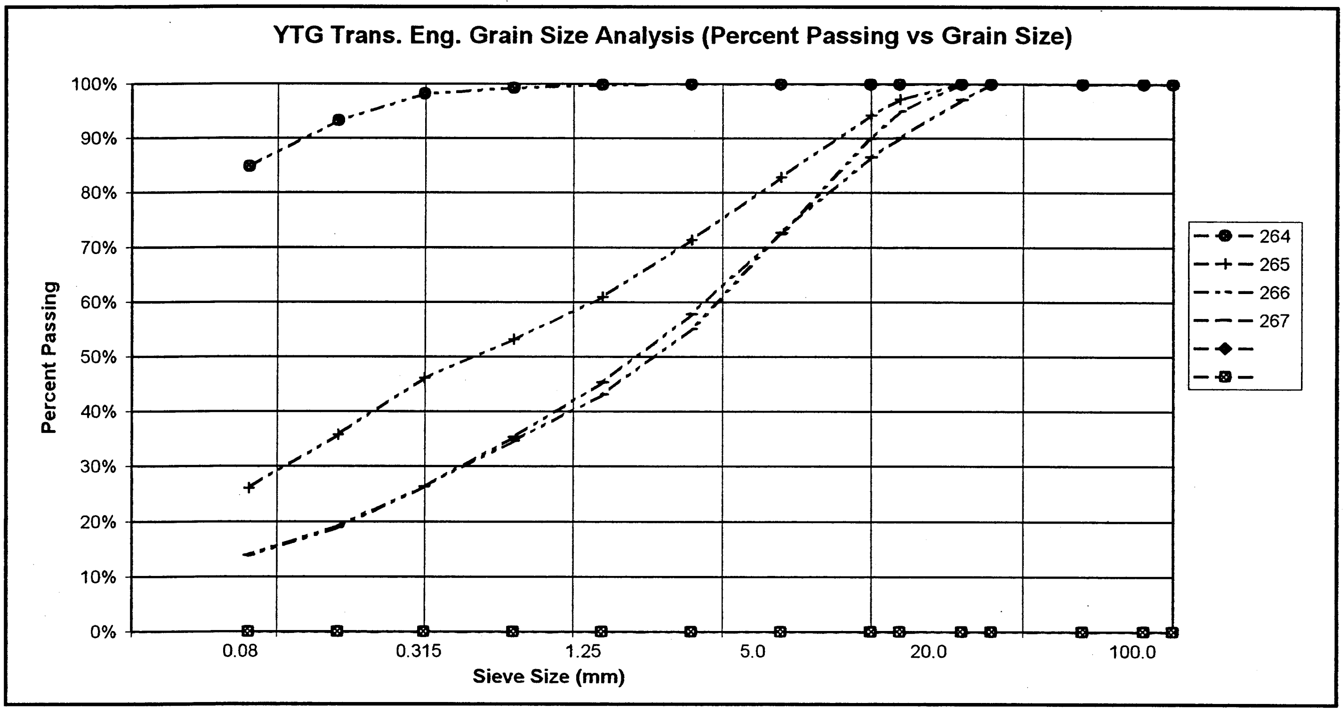


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1747+500 CL
LOGGED BY: G.C.

HOLE No.: 543-1364

DATE COMP: 2000/05/12

FIELD NO:	264	265	266	267		
LAB NO:	568	569	570	571		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	100%	100%	97%		
12.5	100%	97%	95%	90%		
10.0	100%	94%	90%	87%		
5.0	100%	83%	72%	73%		
2.5	100%	71%	55%	58%		
1.25	100%	61%	43%	45%		
0.630	99%	53%	35%	35%		
0.315	98%	46%	26%	26%		
0.160	93%	36%	19%	19%		
0.080	85%	26%	14%	14%		
M.C.(%):	28%	12%	6%	7%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	17	28	27		
% SAND:	15	57	58	59		
% FINES:	85	26	14	14		
CLASSIFICATION	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		

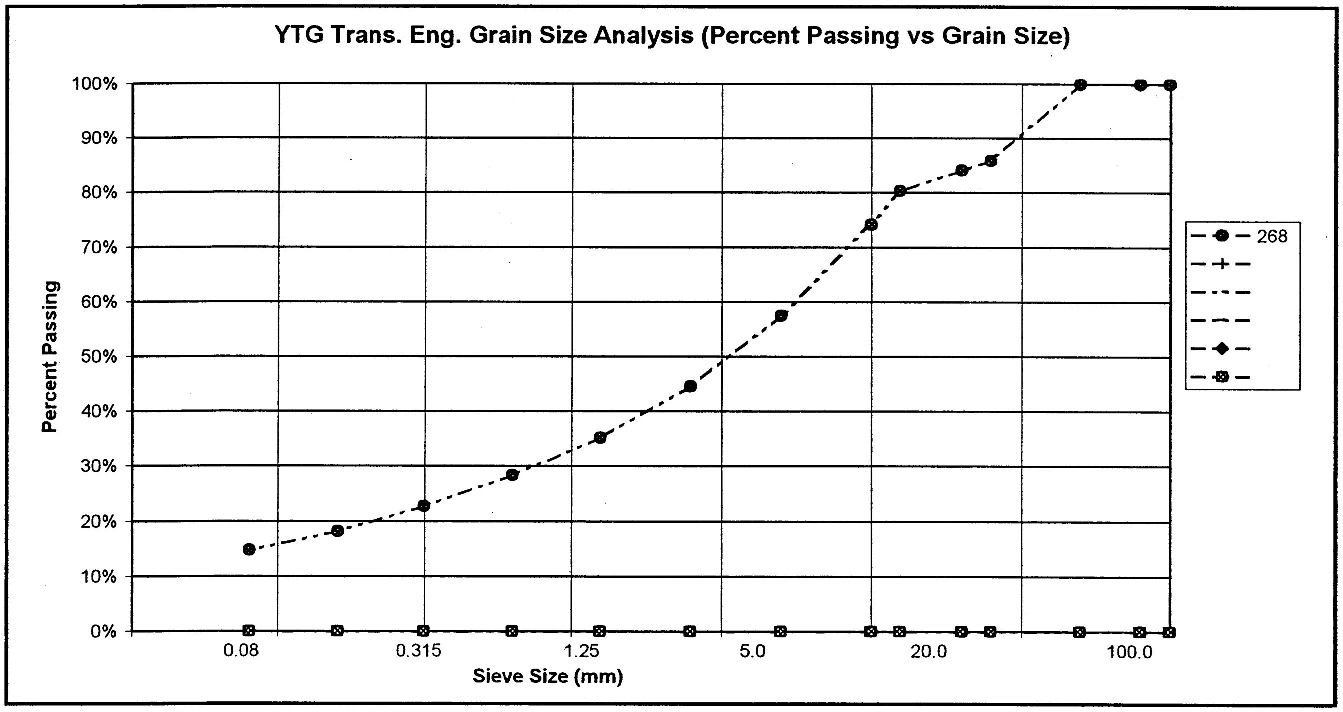

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1747+560 15M LT
LOGGED BY: G.C.

HOLE No.: 543-1365

DATE COMP: 2000/05/12

FIELD NO:	268					
LAB NO:	572					
DEPTH:	3.0-3.2					
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**					
100.0	100%					
80.0	100%					
50.0	100%					
25.0	86%					
20.0	84%					
12.5	80%					
10.0	74%					
5.0	57%					
2.5	45%					
1.25	35%					
0.630	28%					
0.315	23%					
0.160	18%					
0.080	15%					
M.C.(%):	12%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	43					
% SAND:	43					
% FINES:	15					
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)					

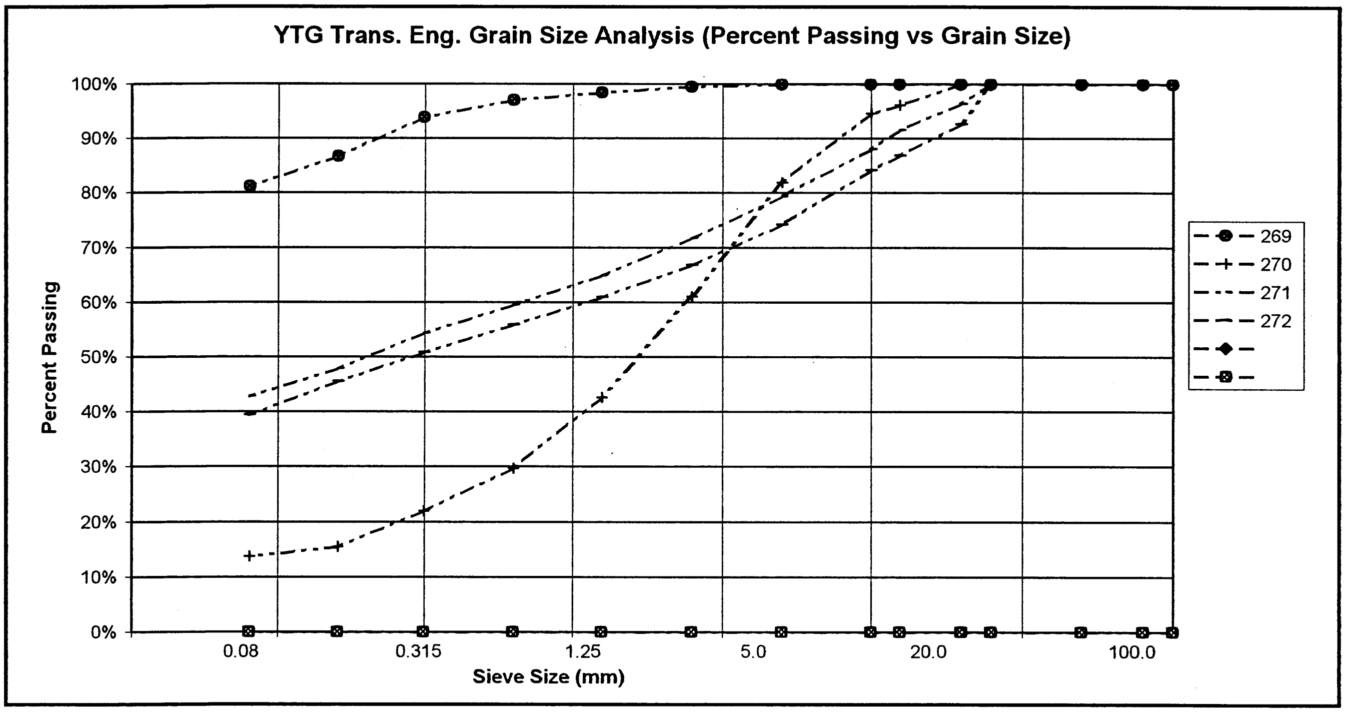


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1747+550 15M RT
LOGGED BY: G.C.

HOLE No.: 543-1366

DATE COMP: 2000/05/12

FIELD NO:	269	270	271	272		
LAB NO:	573	574	575	576		
DEPTH:	0.8-1.0	1.8-2.0	3.0-3.2	4.0-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	100%	96%	93%		
12.5	100%	96%	92%	87%		
10.0	100%	95%	88%	84%		
5.0	100%	82%	79%	74%		
2.5	100%	61%	72%	67%		
1.25	98%	43%	65%	61%		
0.630	97%	30%	59%	56%		
0.315	94%	22%	54%	51%		
0.160	87%	16%	48%	46%		
0.080	81%	14%	43%	39%		
M.C.(%):	96%	16%	17%	15%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	18	21	26		
% SAND:	19	68	36	35		
% FINES:	81	14	43	39		
CLASSIFICATION	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		

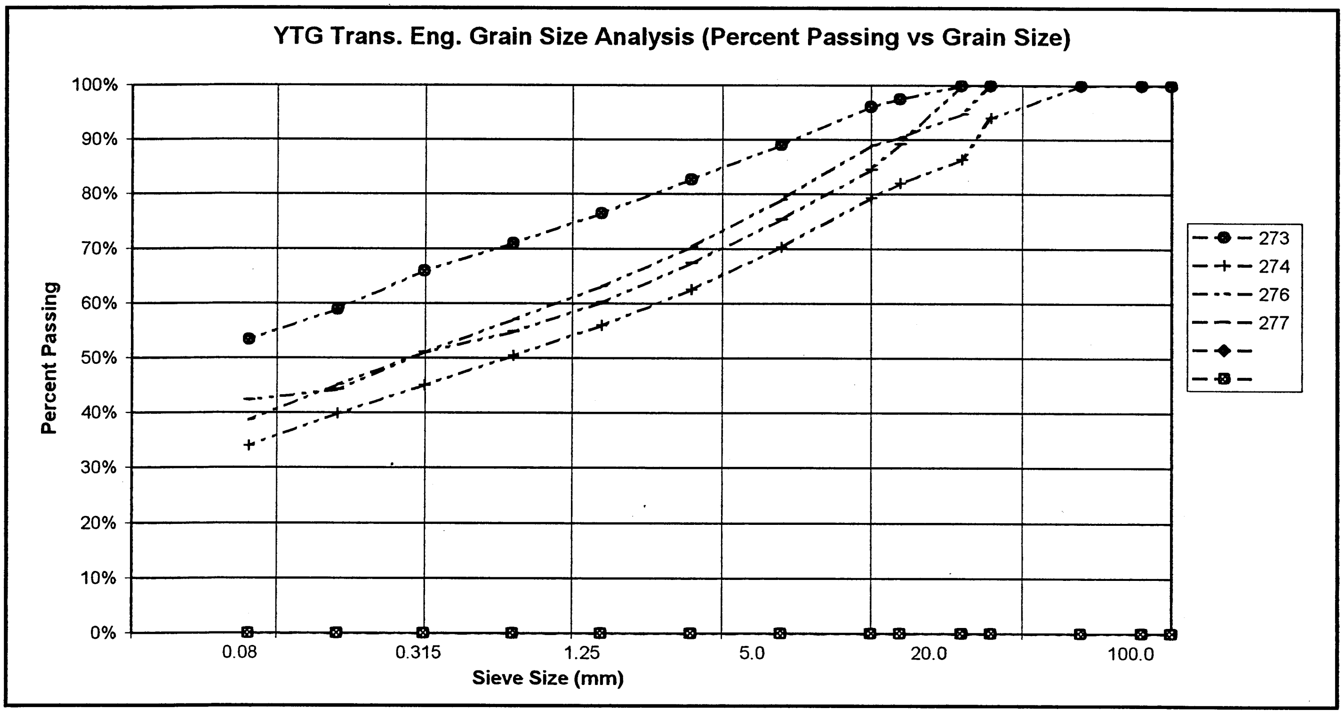


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1747+600 CL
LOGGED BY: G.C.

HOLE No.: 543-1367

DATE COMP: 2000/05/12

FIELD NO:	273	274	276	277		
LAB NO:	577	578	579	580		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.0-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	94%	100%	100%		
20.0	100%	86%	95%	100%		
12.5	97%	82%	91%	89%		
10.0	96%	79%	89%	85%		
5.0	89%	70%	79%	75%		
2.5	83%	63%	70%	67%		
1.25	76%	56%	63%	60%		
0.630	71%	50%	57%	55%		
0.315	66%	45%	51%	51%		
0.160	59%	40%	45%	44%		
0.080	53%	34%	39%	42%		
M.C.(%):	6%	4%	7%	10%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	11	30	21	25		
% SAND:	36	36	40	33		
% FINES:	53	34	39	42		
CLASSIFICATION	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		



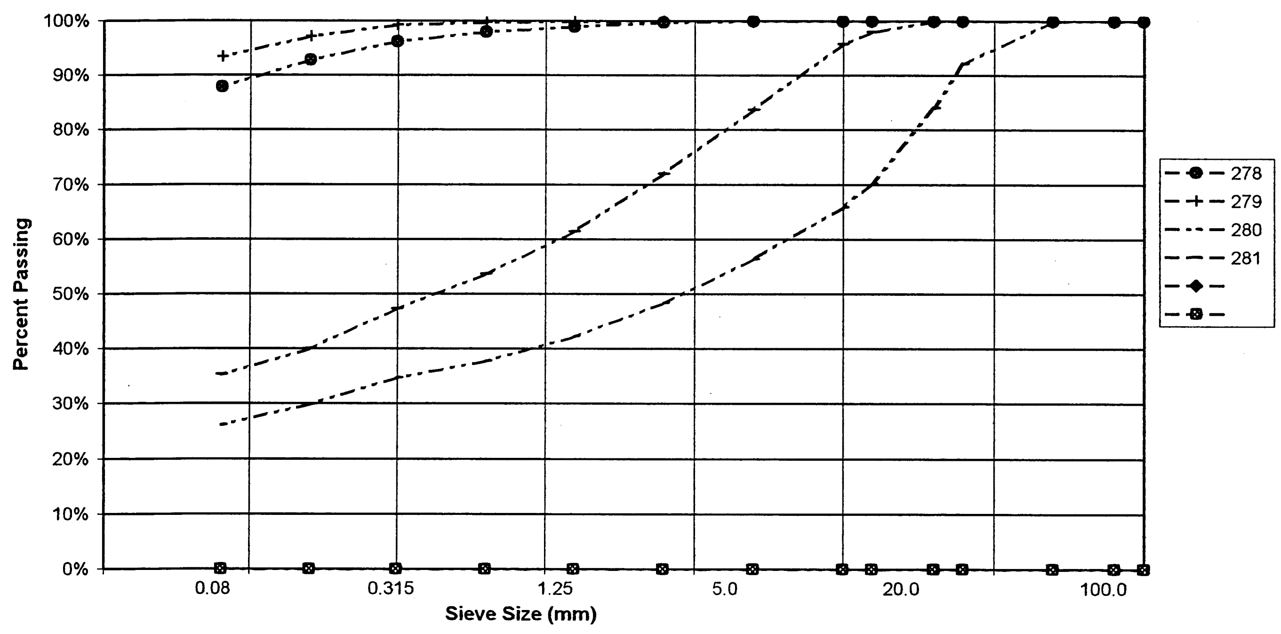
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1747+725 CL
LOGGED BY: G.C.

HOLE No.: 543-1368

DATE COMP: 2000/05/12

FIELD NO:	278	279	280	281		
LAB NO:	581	582	583	584		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	92%	100%		
20.0	100%	100%	84%	100%		
12.5	100%	100%	70%	98%		
10.0	100%	100%	66%	96%		
5.0	100%	100%	56%	84%		
2.5	100%	100%	48%	72%		
1.25	99%	100%	42%	61%		
0.630	98%	100%	38%	54%		
0.315	96%	99%	35%	47%		
0.160	93%	97%	30%	40%		
0.080	88%	93%	26%	35%		
M.C.(%):	21%	39%	9%	10%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	0	44	16		
% SAND:	12	7	30	48		
% FINES:	88	93	26	35		
CLASSIFICATION	SILT (ML)	SILT (ML)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

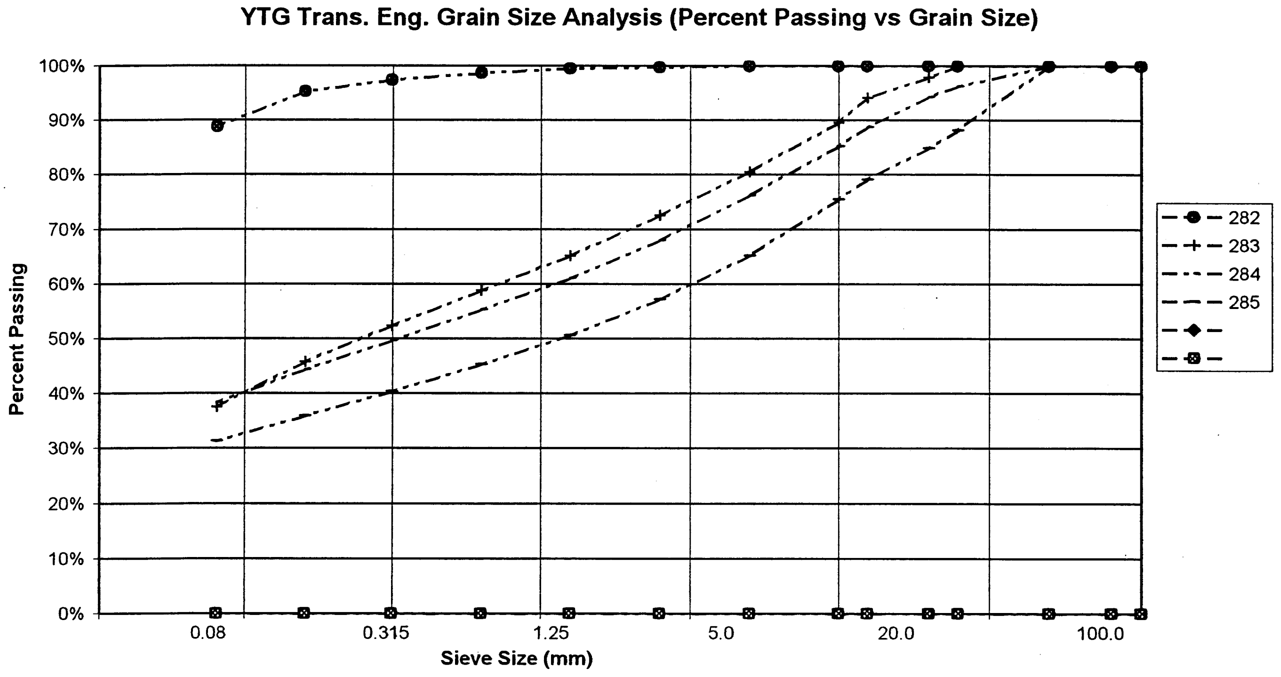


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1747+850 CL
LOGGED BY: G.C.

HOLE No.: 543-1369

DATE COMP: 2000/05/12

FIELD NO:	282	283	284	285		
LAB NO:	585	586	587	588		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	96%	88%		
20.0	100%	98%	94%	85%		
12.5	100%	94%	89%	79%		
10.0	100%	90%	85%	76%		
5.0	100%	81%	76%	65%		
2.5	100%	73%	68%	57%		
1.25	99%	65%	61%	51%		
0.630	99%	59%	55%	45%		
0.315	97%	52%	50%	40%		
0.160	95%	46%	44%	36%		
0.080	89%	38%	38%	31%		
M.C.(%):	13%	12%	9%	7%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	19	24	35		
% SAND:	11	43	38	34		
% FINES:	89	38	38	31		
CLASSIFICATION	SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)		

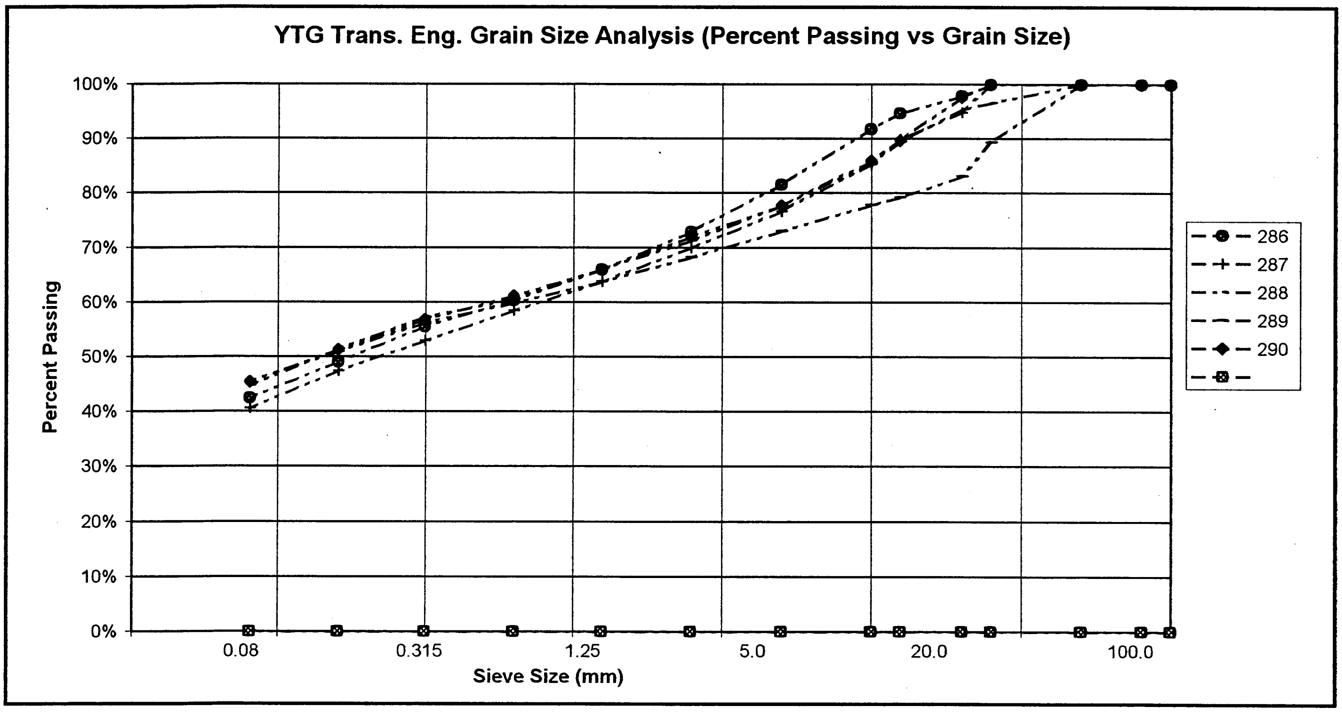


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1747+900 15M LT
LOGGED BY: W.E.

HOLE No.: 544-1370

DATE COMP: 2000/05/15

FIELD NO:	286	287	288	289	290	
LAB NO:	589	590	591	592	593	
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	3.8-4.0	4.8-5.0	
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	
100.0	100%	100%	100%	100%	100%	
80.0	100%	100%	100%	100%	100%	
50.0	100%	100%	100%	100%	100%	
25.0	100%	100%	97%	89%	100%	
20.0	98%	95%	95%	83%	98%	
12.5	95%	90%	89%	79%	90%	
10.0	92%	85%	85%	78%	86%	
5.0	82%	77%	78%	73%	78%	
2.5	73%	70%	71%	68%	72%	
1.25	66%	64%	66%	64%	66%	
0.630	60%	58%	61%	60%	61%	
0.315	55%	53%	57%	56%	57%	
0.160	49%	47%	51%	51%	51%	
0.080	43%	41%	45%	46%	45%	
M.C.(%):	7%	5%	7%	8%	8%	
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	
% GRAVEL:	18	23	22	27	22	
% SAND:	39	36	33	28	32	
% FINES:	43	41	45	46	45	
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	

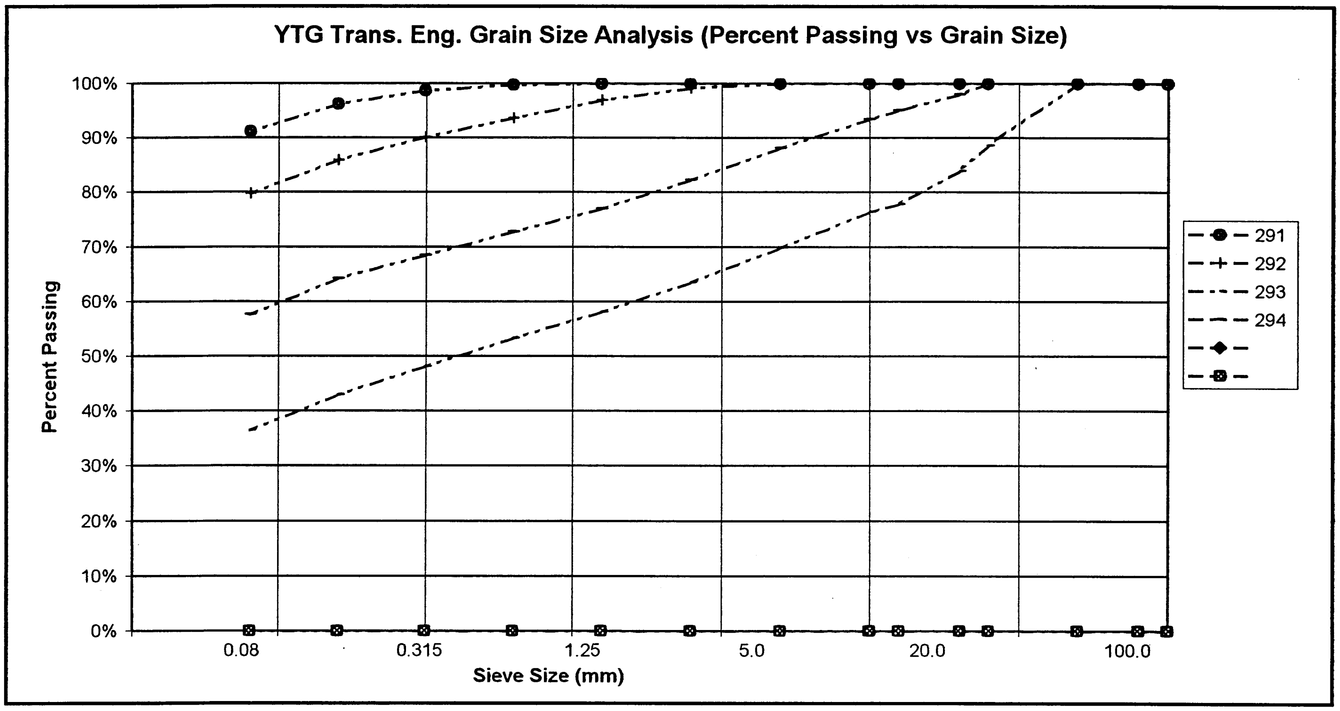


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1748+000 CL
LOGGED BY: W.E.

HOLE No.: 544-1371

DATE COMP: 2000/05/15

FIELD NO:	291	292	293	294		
LAB NO:	594	595	596	597		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	3.8-4.0		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	89%	100%		
20.0	100%	100%	84%	98%		
12.5	100%	100%	78%	95%		
10.0	100%	100%	76%	93%		
5.0	100%	100%	70%	88%		
2.5	100%	99%	63%	82%		
1.25	100%	97%	58%	77%		
0.630	100%	94%	53%	73%		
0.315	99%	90%	48%	68%		
0.160	96%	86%	43%	64%		
0.080	91%	80%	37%	58%		
M.C.(%):	21%	56%	9%	13%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	0	30	12		
% SAND:	9	20	33	31		
% FINES:	91	80	37	58		
CLASSIFICATION	SILT (ML)	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SANDY SILT (ML)		

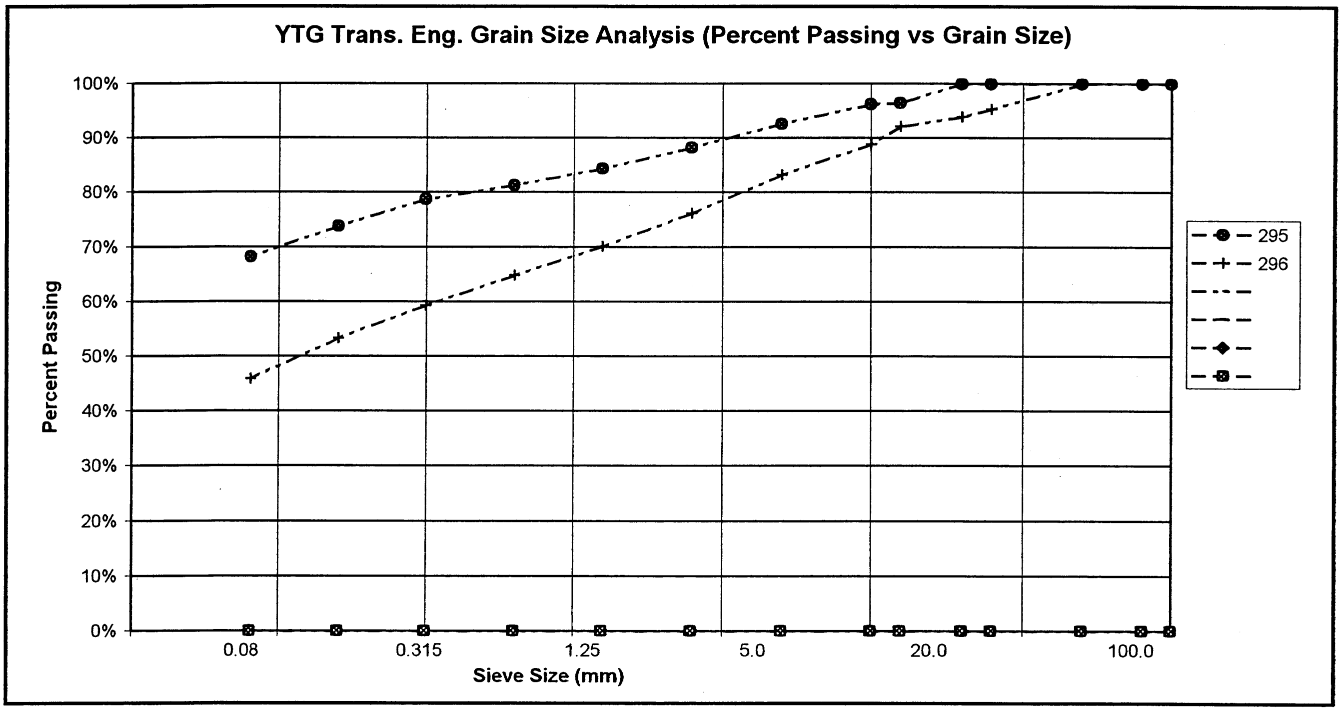


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1748+100 20M LT
LOGGED BY: W.E.

HOLE No.: 544-1372

DATE COMP: 2000/05/15

FIELD NO:	295	296				
LAB NO:	598	599				
DEPTH:	1.0-1.2	2.6-3.0				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	95%				
20.0	100%	94%				
12.5	96%	92%				
10.0	96%	89%				
5.0	93%	83%				
2.5	88%	76%				
1.25	84%	70%				
0.630	81%	65%				
0.315	79%	59%				
0.160	74%	53%				
0.080	68%	46%				
M.C.(%):	26%	14%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	7	17				
% SAND:	24	37				
% FINES:	68	46				
CLASSIFICATION	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)				

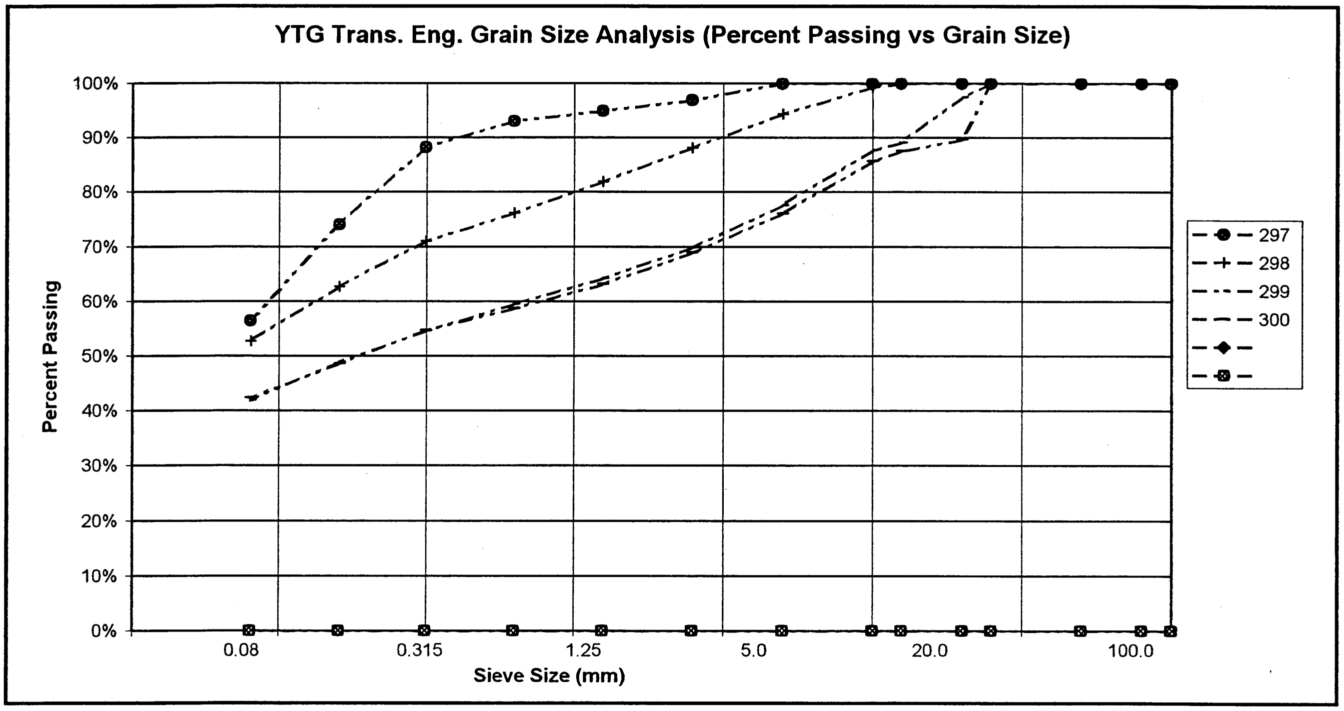

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1748+105 20M RT
LOGGED BY: W.E.

HOLE No.: 544-1373

DATE COMP: 2000/05/15

FIELD NO:	297	298	299	300		
LAB NO:	600	601	602	603		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	100%	97%	90%		
12.5	100%	100%	89%	88%		
10.0	100%	99%	88%	86%		
5.0	100%	94%	78%	76%		
2.5	97%	88%	70%	69%		
1.25	95%	82%	64%	63%		
0.630	93%	76%	59%	59%		
0.315	88%	71%	55%	55%		
0.160	74%	63%	49%	49%		
0.080	57%	53%	42%	42%		
M.C.(%):	13%	21%	15%	14%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	6	22	24		
% SAND:	43	42	36	34		
% FINES:	57	53	42	42		
CLASSIFICATION	SANDY SILT (ML)	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		

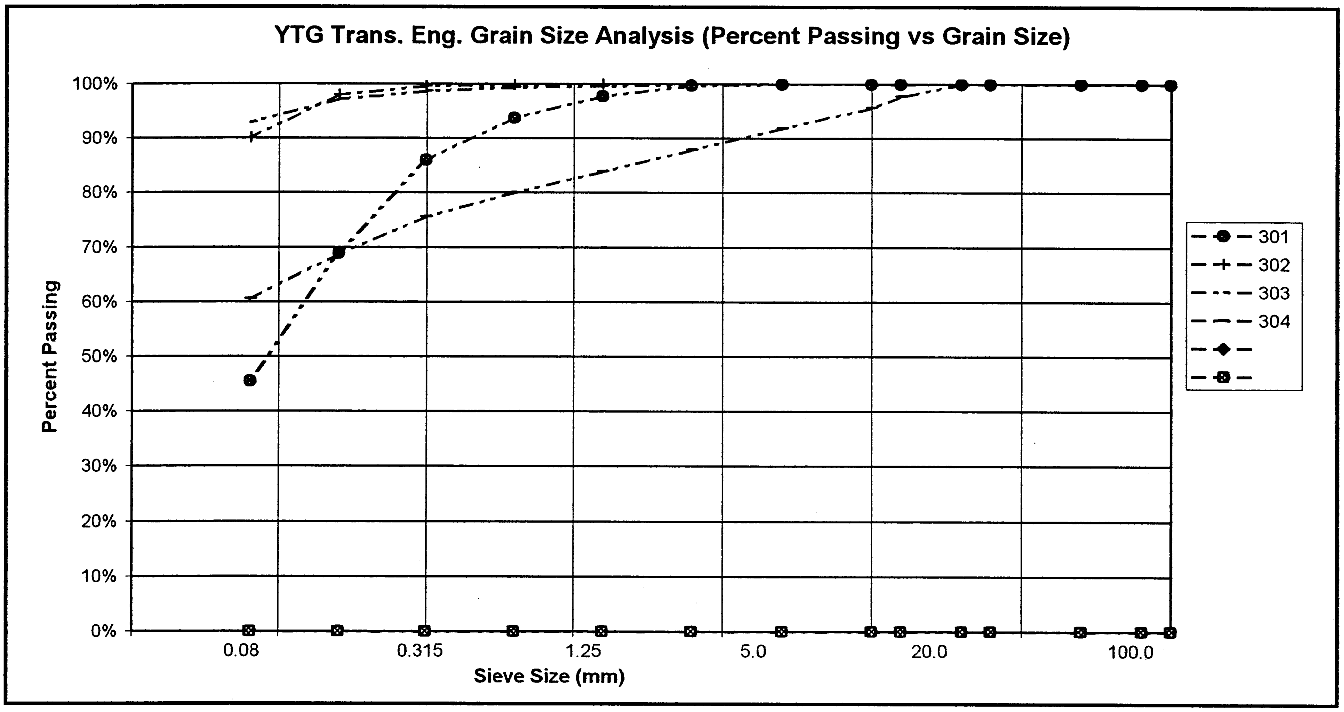


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1748+225 CL
LOGGED BY: W.E.

HOLE No.: 544-1374

DATE COMP: 2000/05/15

FIELD NO:	301	302	303	304		
LAB NO:	604	605	606	607		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.5-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	100%	100%	100%		
12.5	100%	100%	100%	98%		
10.0	100%	100%	100%	96%		
5.0	100%	100%	100%	92%		
2.5	100%	100%	100%	88%		
1.25	98%	100%	100%	84%		
0.630	94%	100%	99%	80%		
0.315	86%	100%	99%	76%		
0.160	69%	98%	97%	69%		
0.080	46%	90%	93%	61%		
M.C.(%):	12%	37%	42%	24%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	0	0	8		
% SAND:	54	10	7	31		
% FINES:	46	90	93	61		
CLASSIFICATION	SILTY SAND (SM)	SILT (ML)	SILT (ML)	SANDY SILT (ML)		

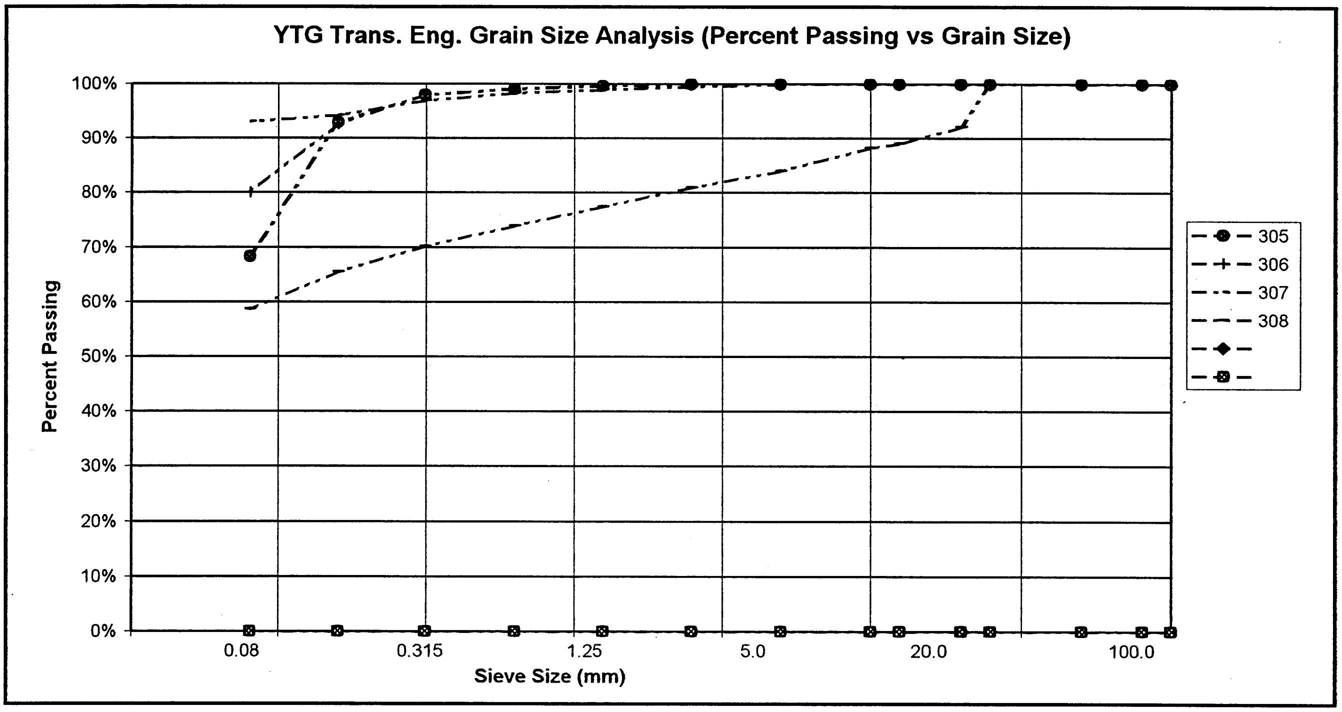


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1748+300 20M LT
LOGGED BY: W.E.

HOLE No.: 544-1375

DATE COMP: 2000/05/15

FIELD NO:	305	306	307	308		
LAB NO:	608	609	610	611		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	100%	100%	92%		
12.5	100%	100%	100%	89%		
10.0	100%	100%	100%	88%		
5.0	100%	100%	100%	84%		
2.5	100%	100%	100%	81%		
1.25	100%	100%	99%	77%		
0.630	99%	99%	98%	74%		
0.315	98%	98%	97%	70%		
0.160	93%	93%	94%	66%		
0.080	68%	80%	93%	59%		
M.C.(%):	25%	35%	66%	18%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	0	0	16		
% SAND:	32	20	7	25		
% FINES:	68	80	93	59		
CLASSIFICATION	SANDY SILT (ML)	SILT WITH SAND (ML)	SILT (ML)	SANDY SILT WITH GRAVEL (ML)		

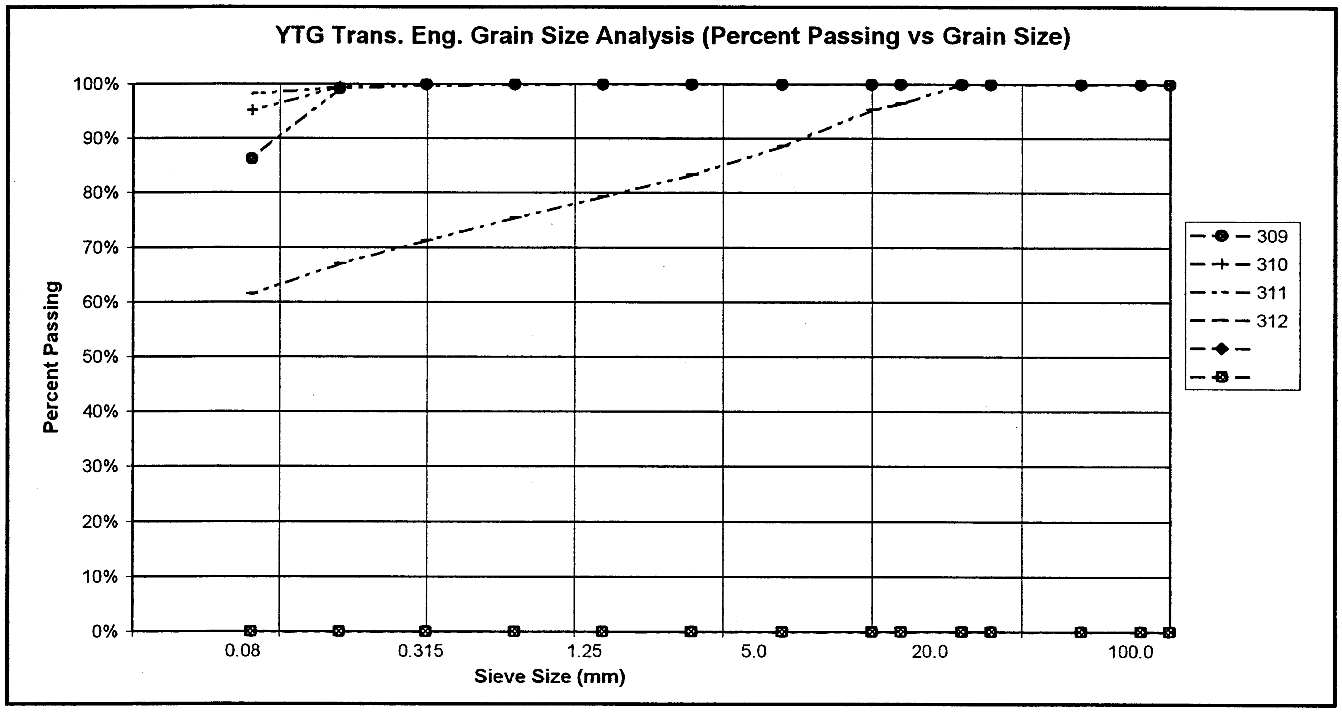


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1748+300 20M RT
LOGGED BY: W.E.

HOLE No.: 544-1376

DATE COMP: 2000/05/16

FIELD NO:	309	310	311	312		
LAB NO:	612	613	614	615		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	3.8-4.0		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	100%	100%	100%		
12.5	100%	100%	100%	96%		
10.0	100%	100%	100%	95%		
5.0	100%	100%	100%	89%		
2.5	100%	100%	100%	83%		
1.25	100%	100%	100%	79%		
0.630	100%	100%	100%	75%		
0.315	100%	100%	100%	71%		
0.160	99%	100%	99%	67%		
0.080	86%	95%	98%	61%		
M.C.(%):	15%	26%	60%	19%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	0	0	11		
% SAND:	14	5	2	27		
% FINES:	86	95	98	61		
CLASSIFICATION	SILT (ML)	SILT (ML)	SILT (ML)	SANDY SILT (ML)		



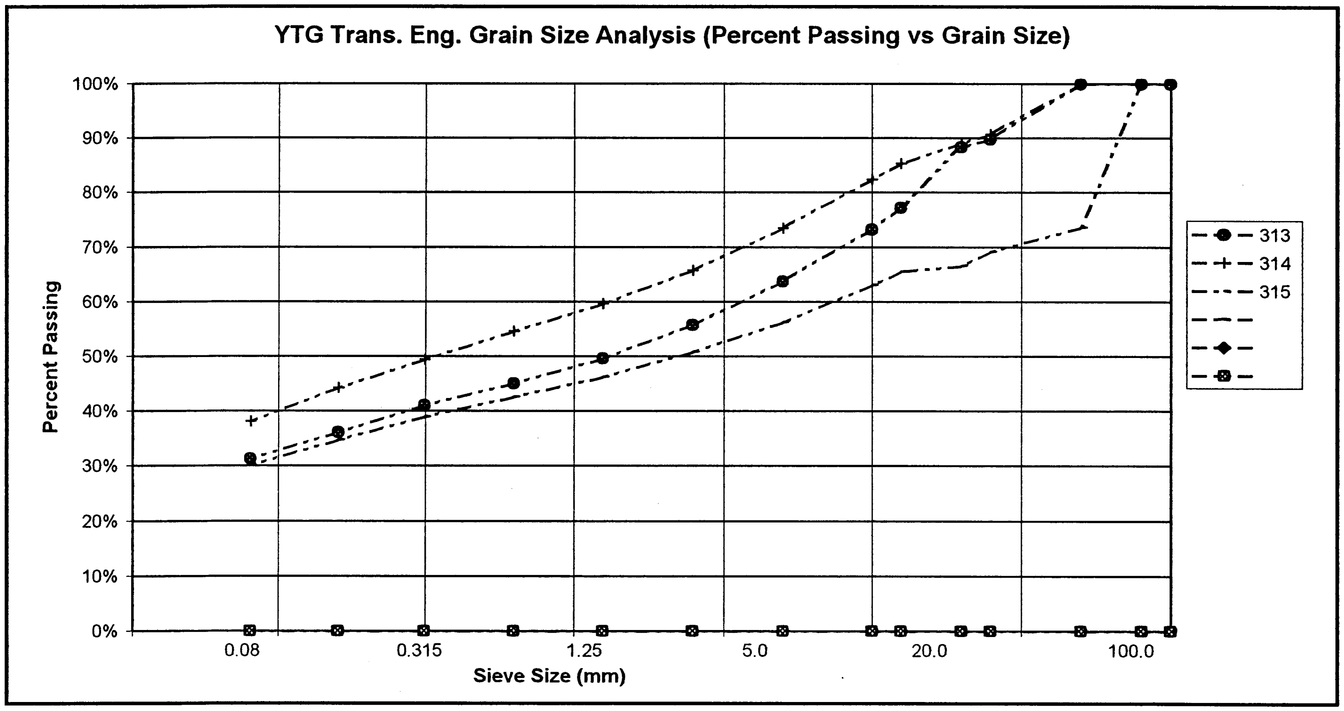
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1748+400 CL
LOGGED BY: W.E.

HOLE No.: 544-1377

DATE COMP: 2000/05/16

FIELD NO:	313	314	315			
LAB NO:	616	617	618			
DEPTH:	0.8-1.0	2.5-3.0	4.4-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	74%			
25.0	90%	91%	69%			
20.0	88%	89%	67%			
12.5	77%	85%	65%			
10.0	73%	82%	63%			
5.0	64%	73%	56%			
2.5	56%	66%	51%			
1.25	50%	60%	46%			
0.630	45%	55%	43%			
0.315	41%	49%	39%			
0.160	36%	44%	35%			
0.080	31%	38%	30%			
M.C.(%):	6%	7%	5%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	36	27	44			
% SAND:	32	35	26			
% FINES:	31	38	30			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)			

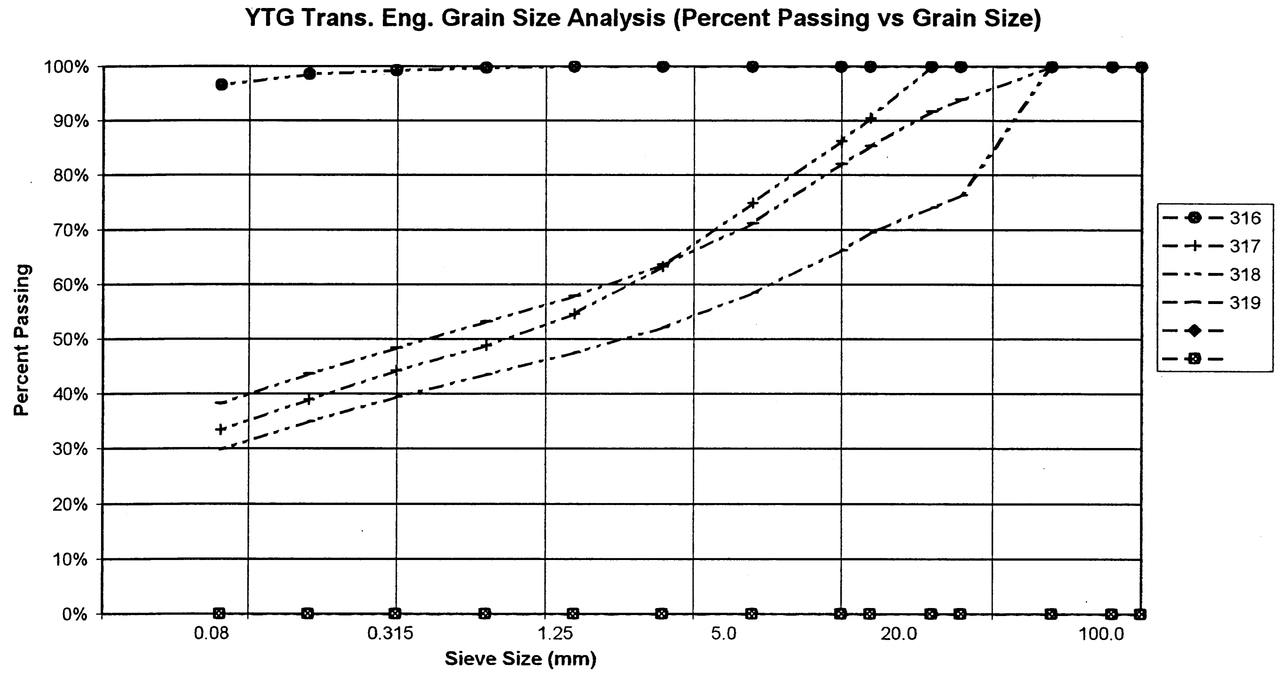


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1748+500 CL
LOGGED BY: W.E.

HOLE No.: 544-1378

DATE COMP: 2000/05/16

FIELD NO:	316	317	318	319		
LAB NO:	619	620	621	622		
DEPTH:	0.8-1.0	1.5-2.0	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	76%	94%		
20.0	100%	100%	74%	92%		
12.5	100%	91%	69%	85%		
10.0	100%	86%	66%	82%		
5.0	100%	75%	58%	71%		
2.5	100%	63%	52%	64%		
1.25	100%	55%	48%	58%		
0.630	100%	49%	44%	53%		
0.315	99%	44%	39%	48%		
0.160	99%	39%	35%	44%		
0.080	97%	33%	30%	38%		
M.C.(%):	20%	10%	9%	8%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	25	42	29		
% SAND:	3	41	29	33		
% FINES:	97	33	30	38		
CLASSIFICATION	SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)		

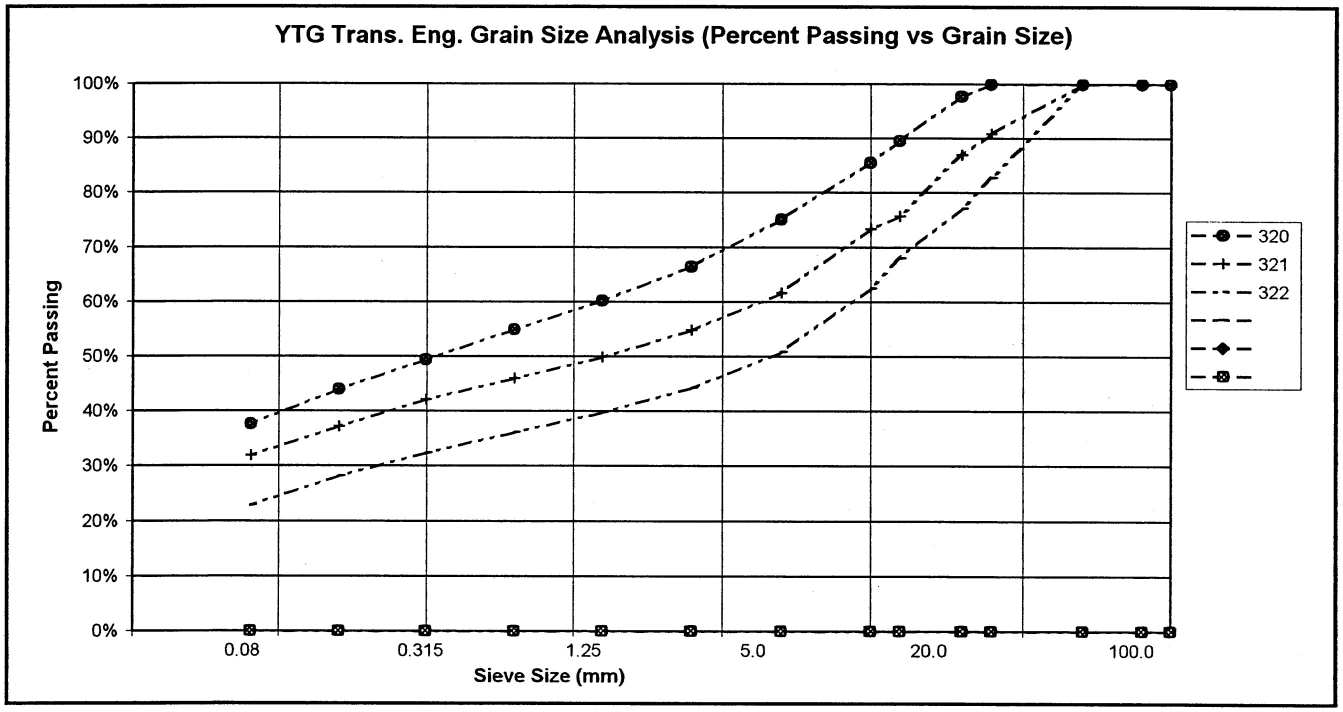


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1748+600 CL
LOGGED BY: W.E.

HOLE No.: 544-1379

DATE COMP: 2000/05/16

FIELD NO:	320	321	322			
LAB NO:	623	624	625			
DEPTH:	0.8-1.0	2.5-3.0	4.0-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	91%	83%			
20.0	98%	87%	77%			
12.5	89%	76%	68%			
10.0	86%	73%	62%			
5.0	75%	62%	51%			
2.5	66%	55%	44%			
1.25	60%	50%	40%			
0.630	55%	46%	36%			
0.315	49%	42%	32%			
0.160	44%	37%	28%			
0.080	38%	32%	23%			
M.C.(%):	5%	4%	3%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	25	38	49			
% SAND:	37	30	28			
% FINES:	38	32	23			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)			



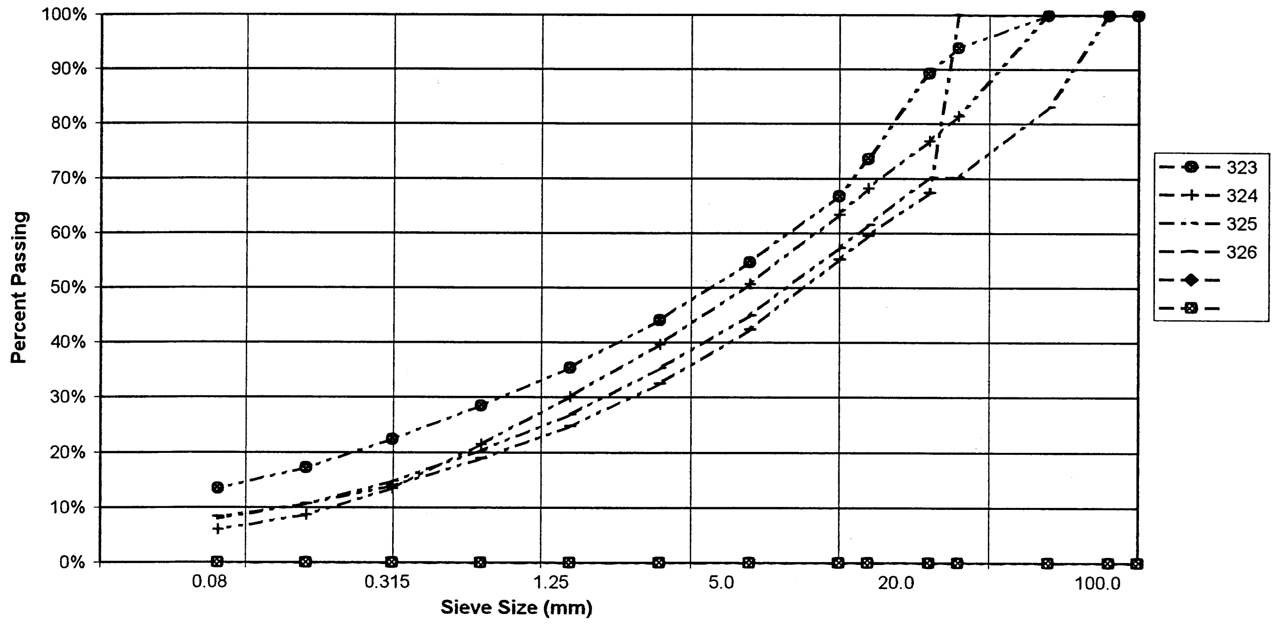
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1748+700 CL
LOGGED BY: W.E.

HOLE No.: 544-1380

DATE COMP: 2000/05/16

FIELD NO:	323	324	325	326		
LAB NO:	626	627	628	629		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.0-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	83%	100%		
25.0	94%	81%	70%	100%		
20.0	89%	77%	70%	67%		
12.5	74%	68%	61%	59%		
10.0	67%	63%	57%	55%		
5.0	55%	51%	45%	42%		
2.5	44%	40%	35%	32%		
1.25	35%	30%	27%	25%		
0.630	28%	21%	20%	19%		
0.315	22%	14%	15%	14%		
0.160	17%	9%	11%	11%		
0.080	14%	6%	8%	8%		
M.C.(%):	5%	2%	3%	2%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	45	49	55	58		
% SAND:	41	45	37	34		
% FINES:	14	6	8	8		
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

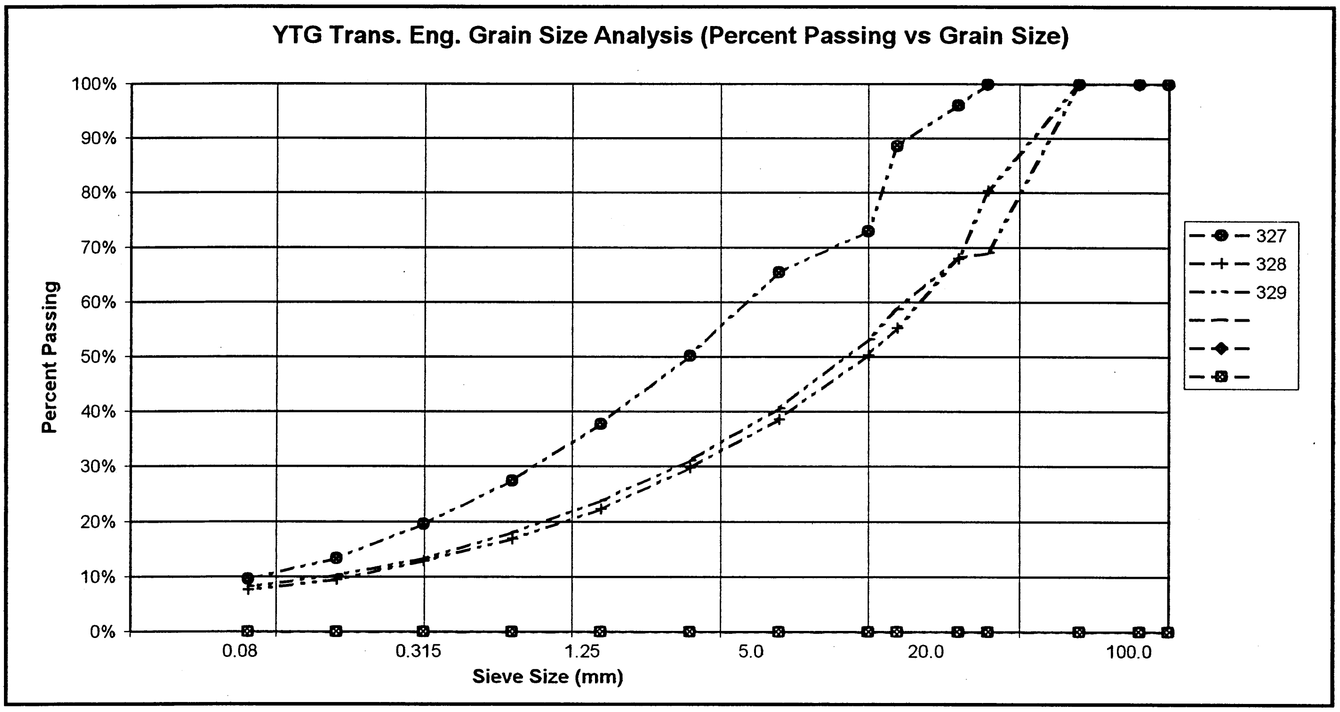


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1748+875 CL
LOGGED BY: W.E.

HOLE No.: 544-1381

DATE COMP: 2000/05/16

FIELD NO:	327	328	329			
LAB NO:	630	631	632			
DEPTH:	1.0-1.5	1.8-2.0	3.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	80%	69%			
20.0	96%	68%	68%			
12.5	89%	55%	59%			
10.0	73%	50%	53%			
5.0	65%	39%	41%			
2.5	50%	30%	31%			
1.25	38%	22%	24%			
0.630	28%	17%	18%			
0.315	20%	13%	13%			
0.160	13%	10%	10%			
0.080	10%	8%	8%			
M.C.(%):	3%	3%	3%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	35	61	59			
% SAND:	56	31	32			
% FINES:	10	8	8			
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			

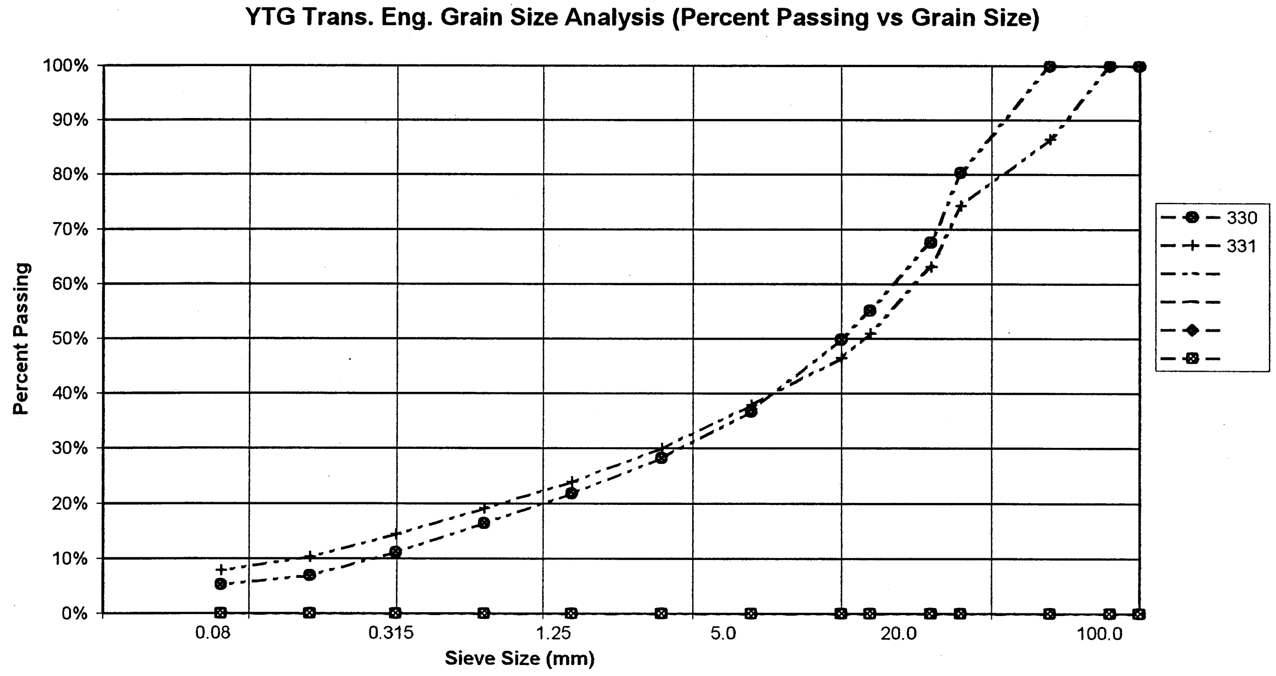


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1748+935 15M LT
LOGGED BY: W.E.

HOLE No.: 544-1382

DATE COMP: 2000/05/16

FIELD NO:	330	331				
LAB NO:	633	634				
DEPTH:	1.4-1.6	4.4-4.6				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	87%				
25.0	80%	74%				
20.0	68%	63%				
12.5	55%	51%				
10.0	50%	47%				
5.0	37%	38%				
2.5	28%	30%				
1.25	22%	24%				
0.630	16%	19%				
0.315	11%	14%				
0.160	7%	10%				
0.080	5%	8%				
M.C.(%):	4%	4%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	63	62				
% SAND:	32	30				
% FINES:	5	8				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				

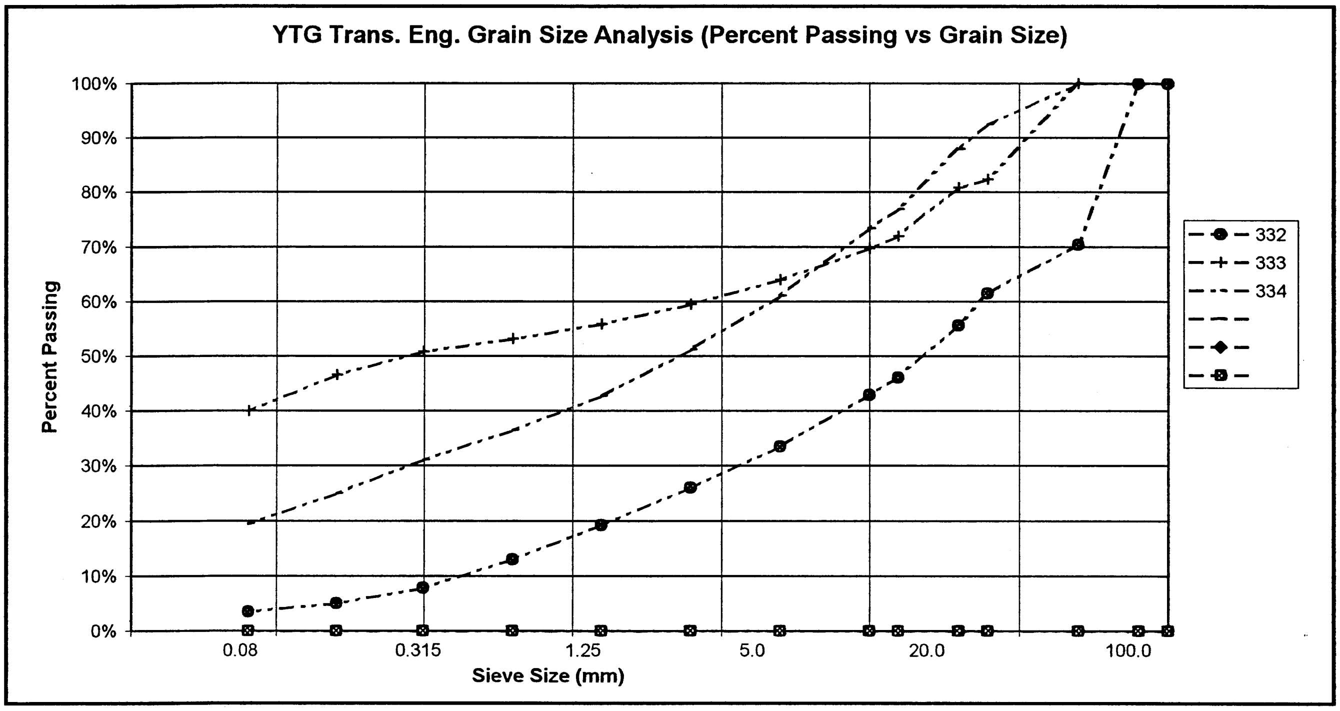


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1748+935 22M RT
LOGGED BY: W.E.

HOLE No.: 544-1383

DATE COMP: 2000/05/16

FIELD NO:	332	333	334			
LAB NO:	635	636	637			
DEPTH:	1.4-1.6	3.1-3.4	4.4-4.6			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	70%	100%	100%			
25.0	61%	82%	92%			
20.0	56%	81%	88%			
12.5	46%	72%	77%			
10.0	43%	70%	73%			
5.0	34%	64%	61%			
2.5	26%	60%	51%			
1.25	19%	56%	43%			
0.630	13%	53%	37%			
0.315	8%	51%	31%			
0.160	5%	47%	25%			
0.080	4%	40%	19%			
M.C.(%):	2%	17%	9%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	66	36	39			
% SAND:	30	24	42			
% FINES:	4	40	19			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)			

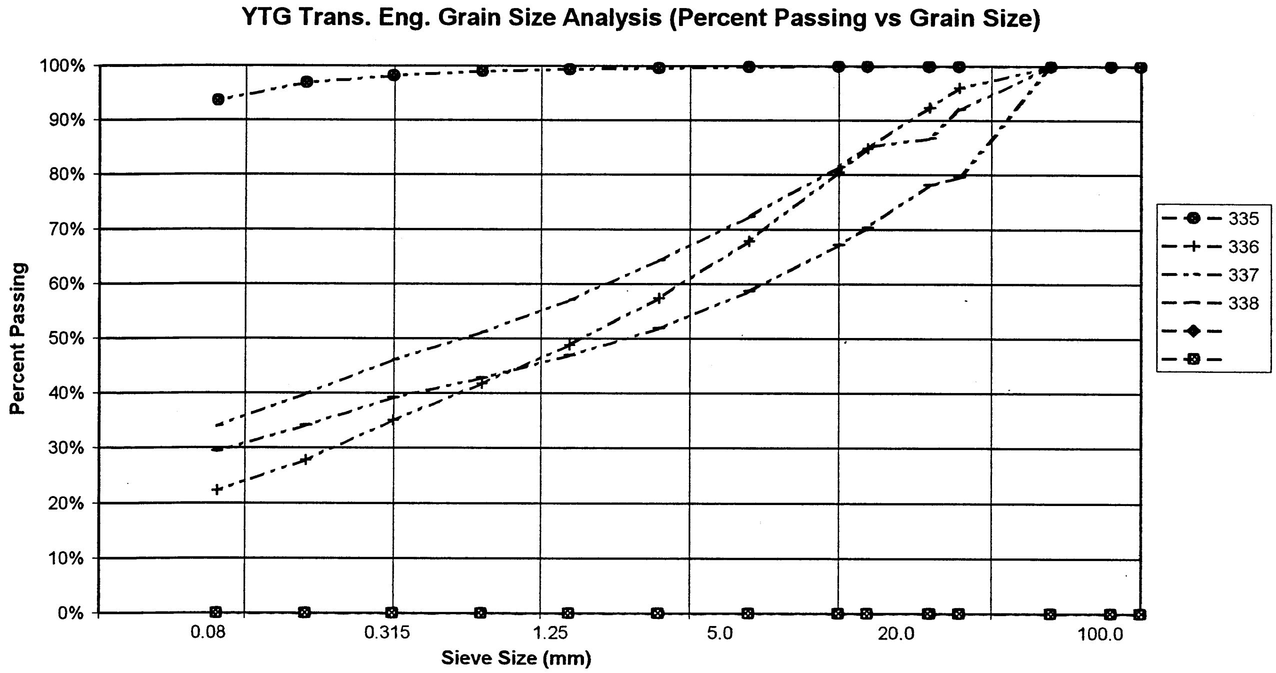

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1749+010 5M RT
LOGGED BY: W.E.

HOLE No.: 544-1384

DATE COMP: 2000/05/16

FIELD NO:	335	336	337	338		
LAB NO:	638	639	640	641		
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	96%	92%	80%		
20.0	100%	92%	87%	78%		
12.5	100%	85%	85%	70%		
10.0	100%	81%	81%	67%		
5.0	100%	68%	72%	59%		
2.5	100%	57%	64%	52%		
1.25	99%	49%	57%	47%		
0.630	99%	42%	51%	43%		
0.315	98%	35%	46%	39%		
0.160	97%	28%	40%	34%		
0.080	94%	22%	34%	29%		
M.C.(%):	8%	3%	5%	4%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	32	28	41		
% SAND:	6	46	38	29		
% FINES:	94	22	34	29		
CLASSIFICATION	SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)		

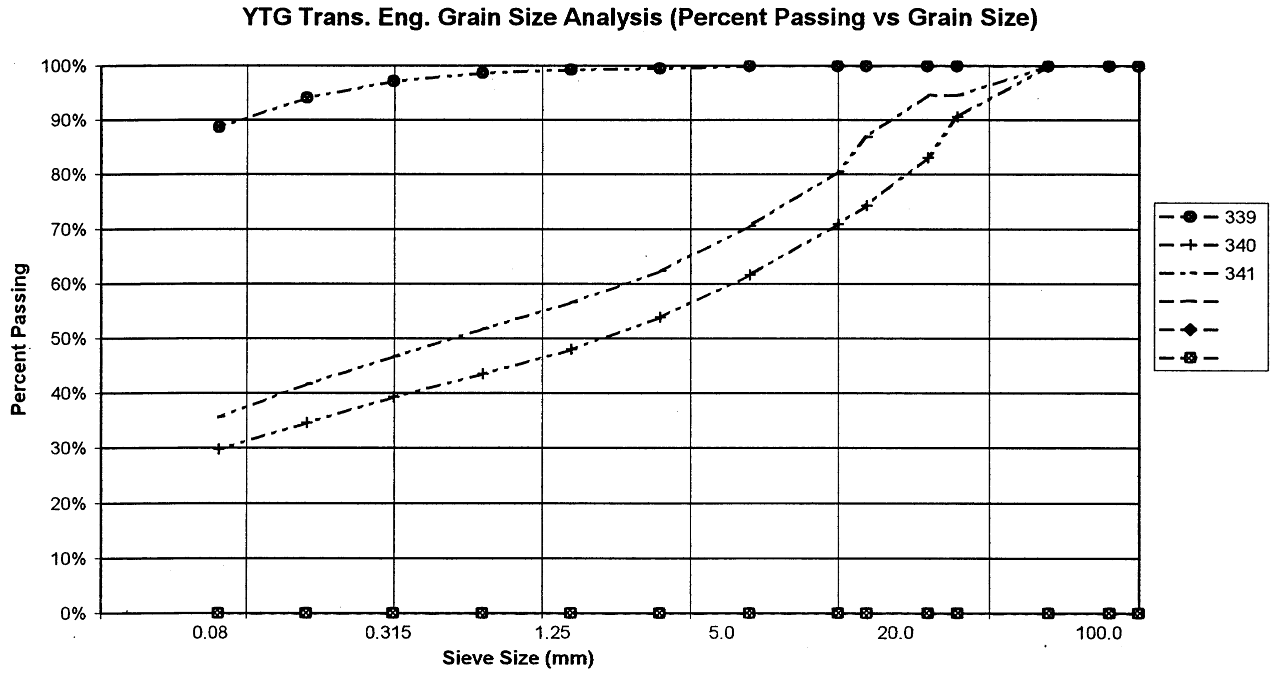


PROJECT NUMBER:	092-202101-0361-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 11
PROJECT LOCATION:	KM 1729.6-1787 A/H
DRILL UNIT:	MOBILE B40 L
HOLE LOCATION:	1749+100 CL
LOGGED BY:	W.E.

HOLE No.: 544-1385

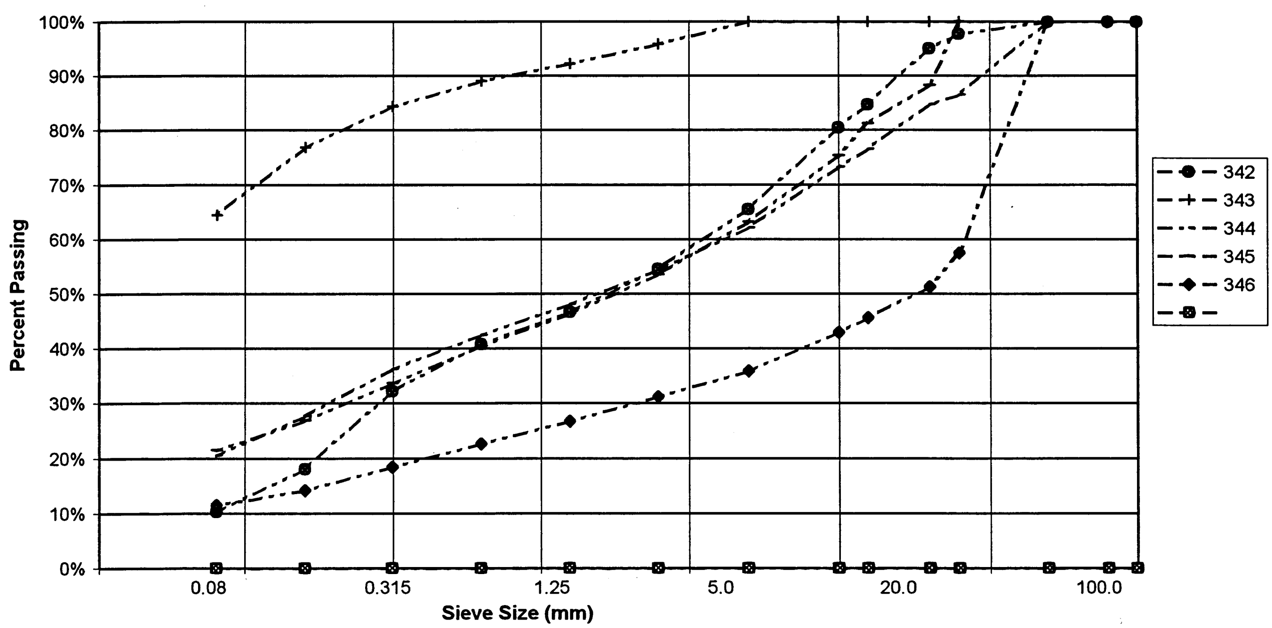
DATE COMP: 2000/05/16

FIELD NO:	339	340	341			
LAB NO:	642	643	644			
DEPTH:	0.9-1.1	2.8-3.0	4.4-4.6			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	91%	95%			
20.0	100%	83%	95%			
12.5	100%	74%	87%			
10.0	100%	71%	81%			
5.0	100%	62%	71%			
2.5	100%	54%	62%			
1.25	99%	48%	57%			
0.630	99%	44%	52%			
0.315	97%	39%	47%			
0.160	94%	35%	42%			
0.080	89%	30%	36%			
M.C.(%):	11%	5%	5%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	0	38	29			
% SAND:	11	32	35			
% FINES:	89	30	36			
CLASSIFICATION	SILT (ML)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)			



PROJECT NUMBER: 092-202101-0361-1 HOLE No.: 544-1386
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1749+225 17M LT
LOGGED BY: W.E. DATE COMP: 2000/05/16

FIELD NO:	342	343	344	345	346	
LAB NO:	645	646	647	648	649	
DEPTH:	0.8-1.0	1.4-1.6	2.0-2.2	2.8-3.0	4.4-4.6	
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	
100.0	100%	100%	100%	100%	100%	
80.0	100%	100%	100%	100%	100%	
50.0	100%	100%	100%	100%	100%	
25.0	98%	100%	87%	100%	58%	
20.0	95%	100%	85%	88%	51%	
12.5	85%	100%	77%	81%	46%	
10.0	80%	100%	73%	75%	43%	
5.0	66%	100%	62%	63%	36%	
2.5	55%	96%	54%	53%	31%	
1.25	47%	92%	48%	46%	27%	
0.630	41%	89%	43%	41%	23%	
0.315	32%	84%	36%	34%	18%	
0.160	18%	77%	28%	27%	14%	
0.080	10%	64%	21%	22%	11%	
M.C.(%):	3%	35%	9%	10%	5%	
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	
% GRAVEL:	34	0	38	37	64	
% SAND:	55	36	42	42	24	
% FINES:	10	64	21	22	11	
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	



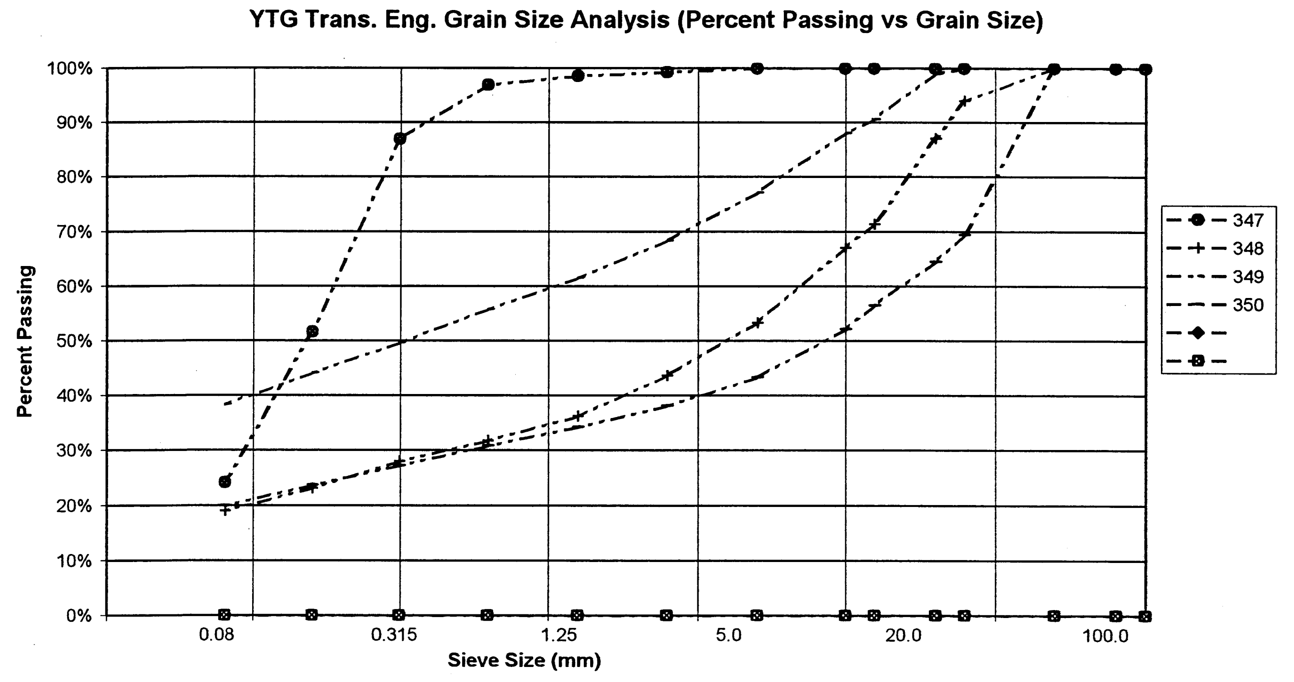
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1749+235 15M RT
LOGGED BY: W.E.

HOLE No.: 544-1387

DATE COMP: 2000/05/16

FIELD NO:	347	348	349	350		
LAB NO:	650	651	652	653		
DEPTH:	0.1-0.3	1.4-1.6	2.9-3.1	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	94%	100%	69%		
20.0	100%	87%	99%	64%		
12.5	100%	71%	91%	56%		
10.0	100%	67%	88%	52%		
5.0	100%	53%	77%	43%		
2.5	99%	44%	68%	38%		
1.25	99%	36%	61%	34%		
0.630	97%	32%	56%	31%		
0.315	87%	28%	50%	27%		
0.160	52%	23%	44%	24%		
0.080	24%	19%	38%	20%		
M.C.(%):	28%	5%	6%	4%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	47	23	57		
% SAND:	76	34	39	23		
% FINES:	24	19	38	20		
CLASSIFICATION	SILTY SAND (SM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)		



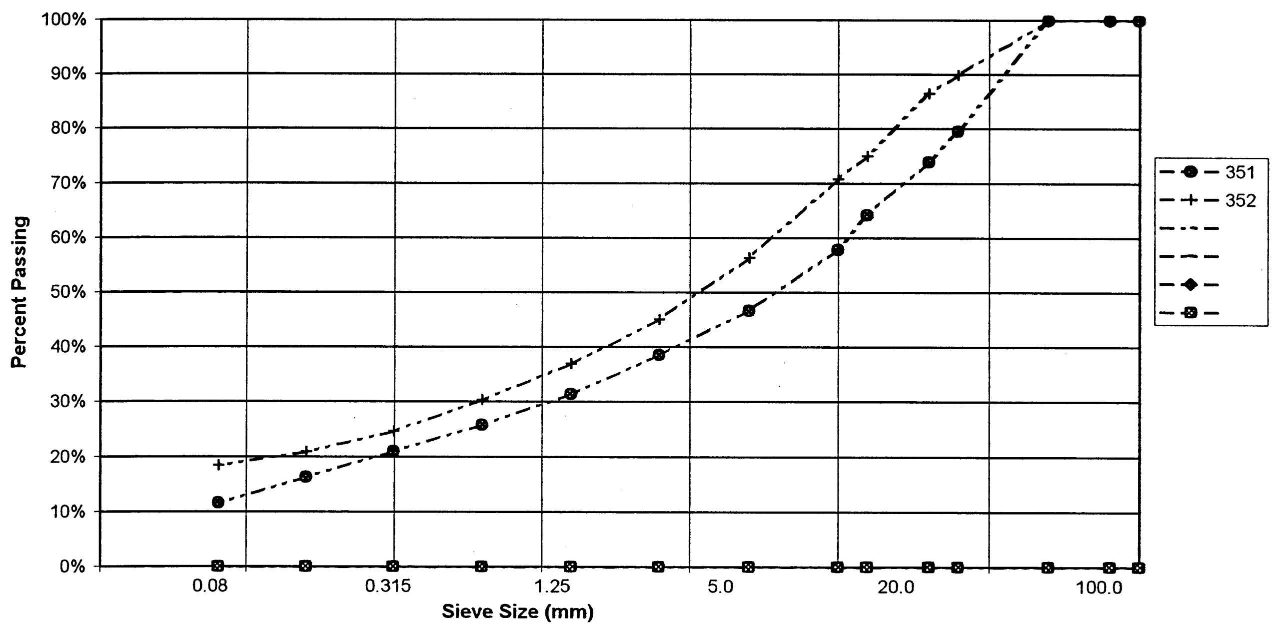
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1749+350 CL
LOGGED BY: W.E.

HOLE No.: 544-1388

DATE COMP: 2000/05/16

FIELD NO:	351	352				
LAB NO:	654	655				
DEPTH:	1.8-2.0	4.4-4.6				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	80%	90%				
20.0	74%	87%				
12.5	64%	75%				
10.0	58%	71%				
5.0	47%	56%				
2.5	39%	45%				
1.25	31%	37%				
0.630	26%	30%				
0.315	21%	25%				
0.160	16%	21%				
0.080	12%	18%				
M.C.(%):	4%	2%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	53	44				
% SAND:	35	38				
% FINES:	12	18				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY GRAVEL WITH SAND (GM)				

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

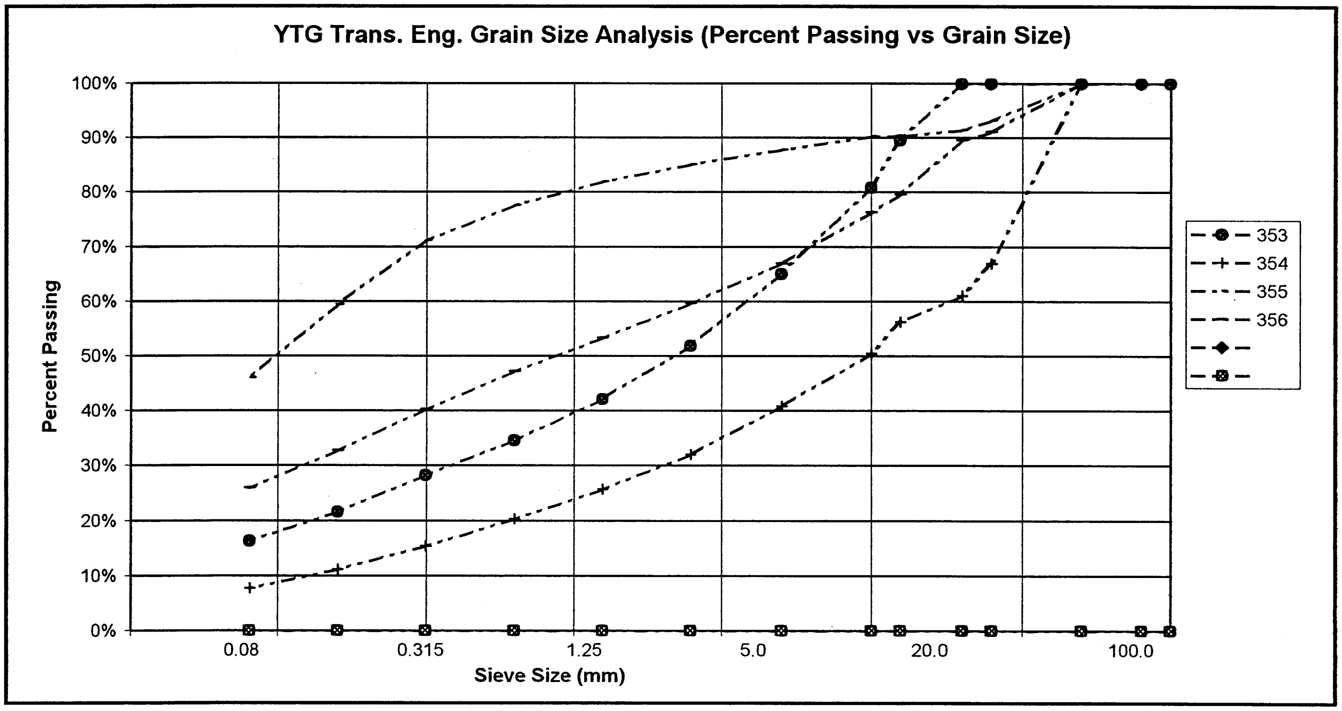


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1749+450 CL
LOGGED BY: W.E.

HOLE No.: 544-1389

DATE COMP: 2000/05/16

FIELD NO:	353	354	355	356		
LAB NO:	656	657	658	659		
DEPTH:	.9-1.1	2.0-2.2	3.0-3.2	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	67%	93%	91%		
20.0	100%	61%	91%	89%		
12.5	90%	56%	90%	80%		
10.0	81%	50%	90%	76%		
5.0	65%	41%	88%	67%		
2.5	52%	32%	85%	60%		
1.25	42%	26%	82%	53%		
0.630	35%	20%	78%	47%		
0.315	28%	15%	71%	40%		
0.160	22%	11%	59%	33%		
0.080	16%	8%	46%	26%		
M.C.(%):	6%	3%	13%	8%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	35	59	12	33		
% SAND:	49	33	42	41		
% FINES:	16	8	46	26		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)		

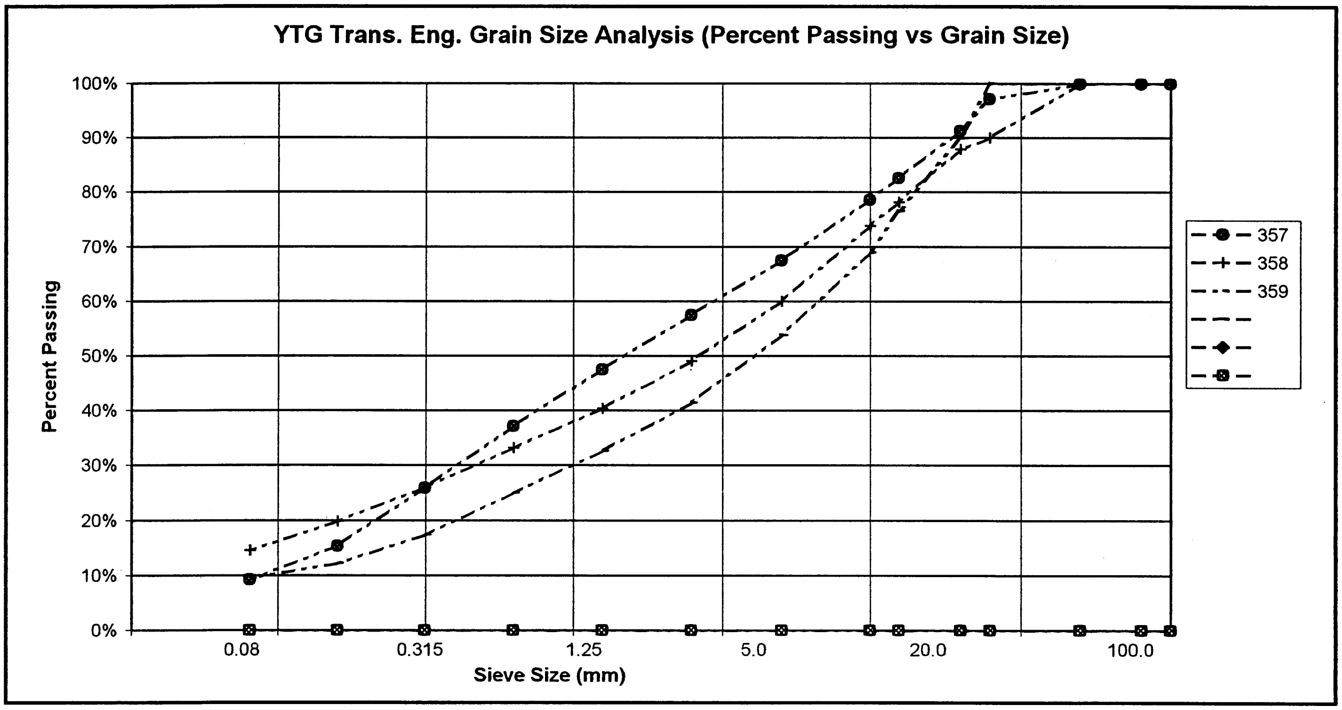


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1749+550 10M RT
LOGGED BY: W.E.

HOLE No.: 544-1390

DATE COMP: 2000/05/16

FIELD NO:	357	358	359			
LAB NO:	660	661	662			
DEPTH:	0.8-1.0	2.0-2.2	4.4-4.6			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	97%	90%	100%			
20.0	91%	88%	90%			
12.5	83%	78%	77%			
10.0	79%	74%	69%			
5.0	67%	60%	54%			
2.5	57%	49%	41%			
1.25	48%	40%	33%			
0.630	37%	33%	25%			
0.315	26%	26%	17%			
0.160	15%	20%	12%			
0.080	9%	15%	10%			
M.C.(%):	3%	7%	3%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	33	40	46			
% SAND:	58	45	44			
% FINES:	9	15	10			
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			

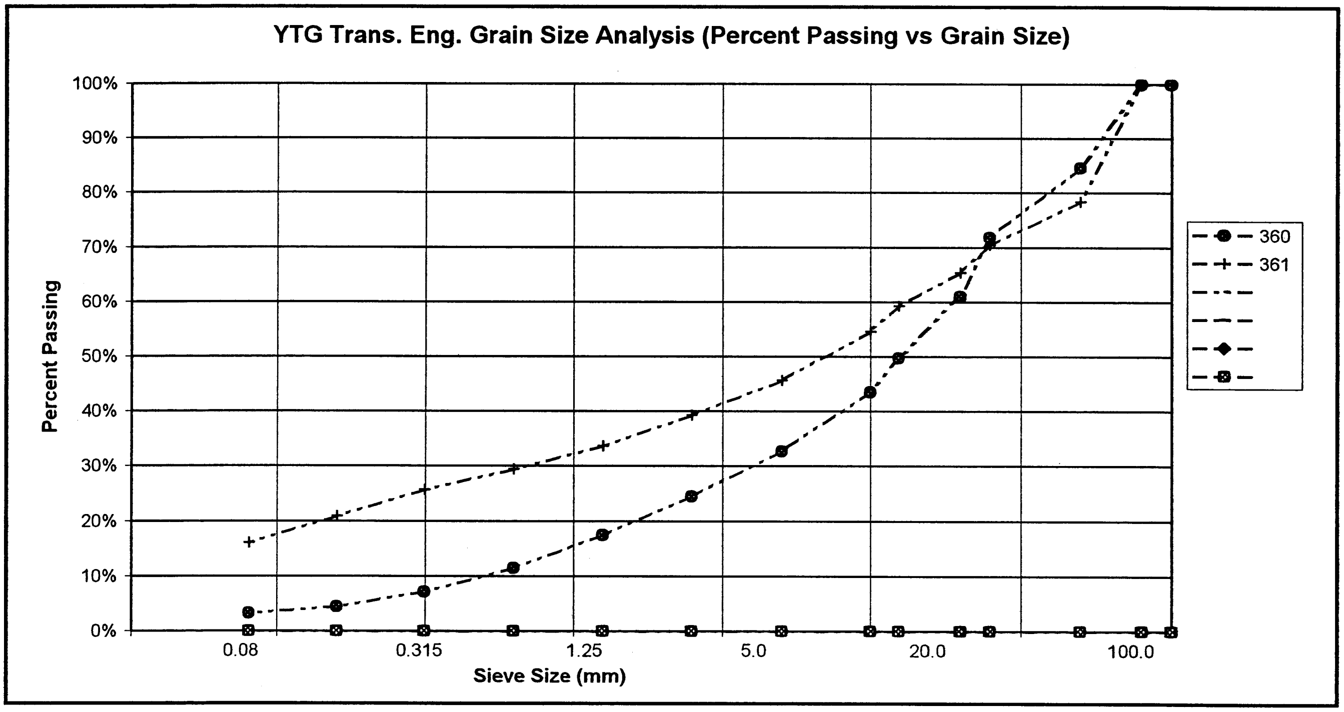


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1749+650 CL
LOGGED BY: W.E.

HOLE No.: 544-1391

DATE COMP: 2000/05/16

FIELD NO:	360	361				
LAB NO:	663	664				
DEPTH:	1.4-1.6	4.4-4.6				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	85%	78%				
25.0	72%	70%				
20.0	61%	65%				
12.5	50%	59%				
10.0	44%	55%				
5.0	33%	46%				
2.5	25%	39%				
1.25	17%	34%				
0.630	11%	29%				
0.315	7%	26%				
0.160	4%	21%				
0.080	3%	16%				
M.C.(%):	3%	6%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	67	54				
% SAND:	29	30				
% FINES:	3	16				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY GRAVEL WITH SAND (GM)				

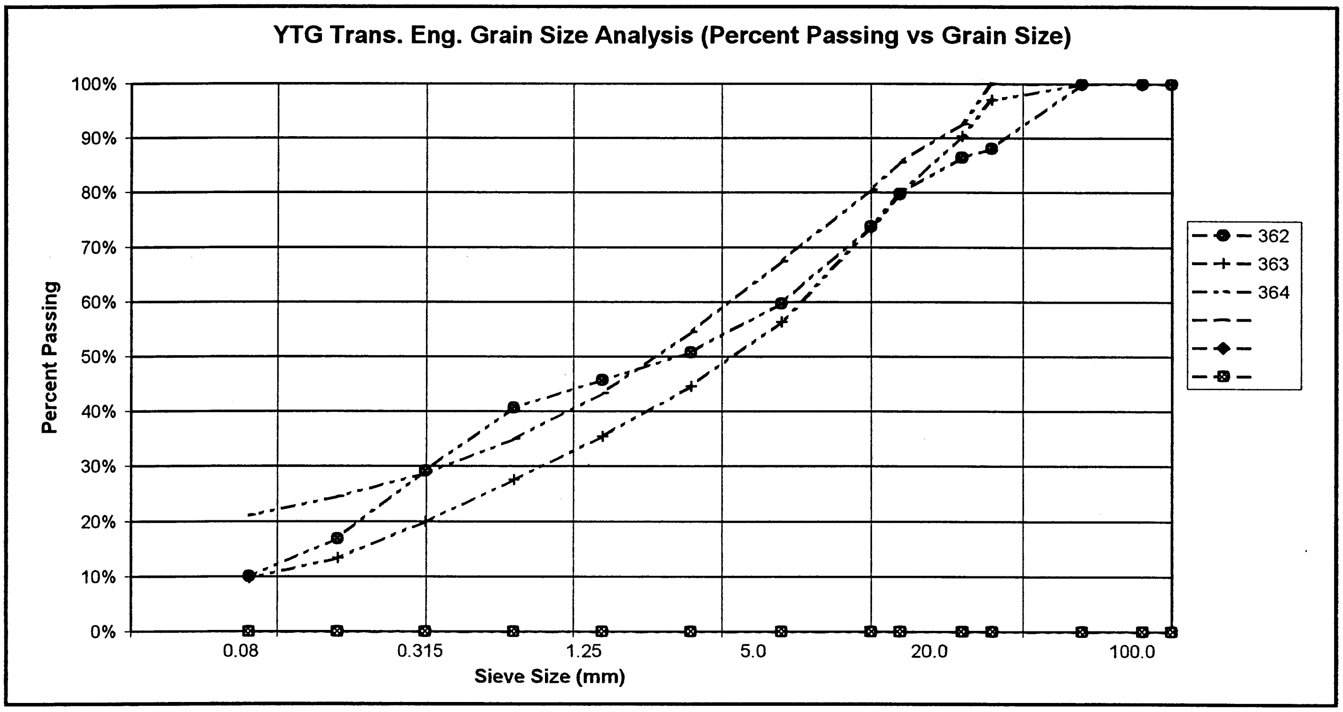


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1749+687 10M RT
LOGGED BY: W.E.

HOLE No.: 544-1392

DATE COMP: 2000/05/17

FIELD NO:	362	363	364			
LAB NO:	665	666	667			
DEPTH:	1.1-1.3	2.5-2.7	4.4-4.6			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	88%	97%	100%			
20.0	87%	90%	93%			
12.5	80%	80%	86%			
10.0	74%	73%	81%			
5.0	60%	56%	67%			
2.5	51%	45%	55%			
1.25	46%	35%	43%			
0.630	41%	28%	35%			
0.315	29%	20%	29%			
0.160	17%	13%	25%			
0.080	10%	10%	21%			
M.C.(%):	13%	4%	8%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	40	44	33			
% SAND:	50	47	46			
% FINES:	10	10	21			
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND WITH GRAVEL (SM)			

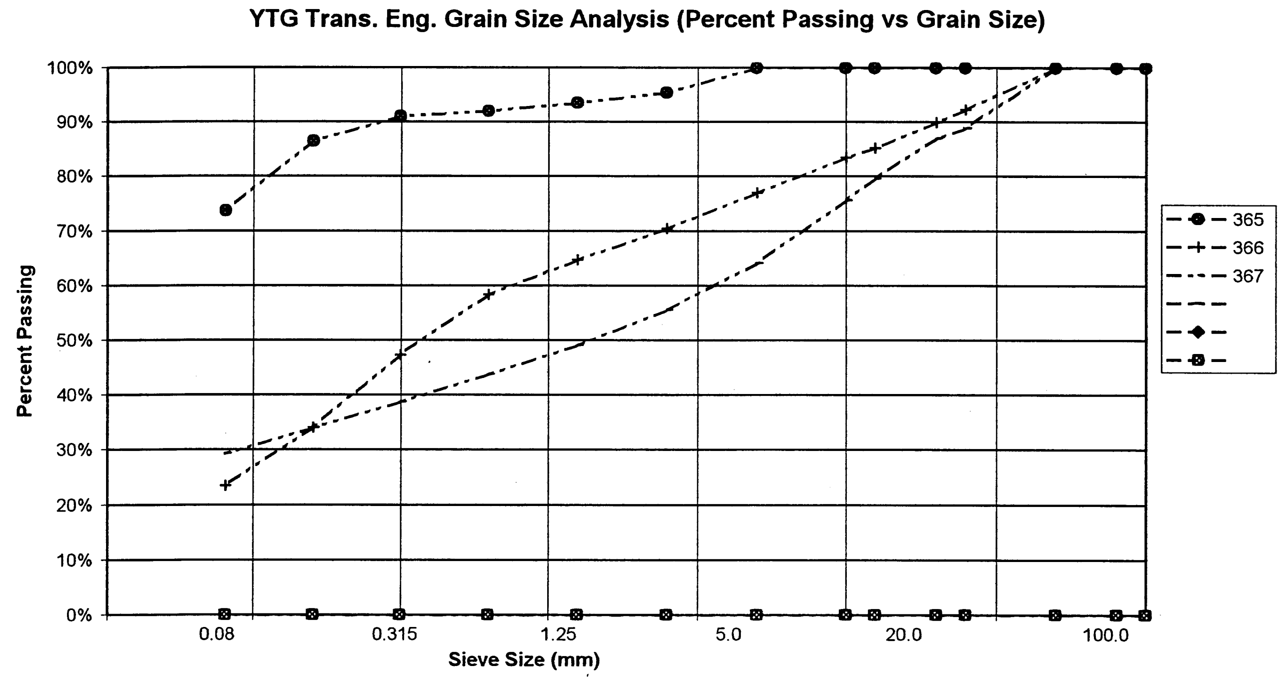


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1749+687 24M LT
LOGGED BY: W.E.

HOLE No.: 544-1393

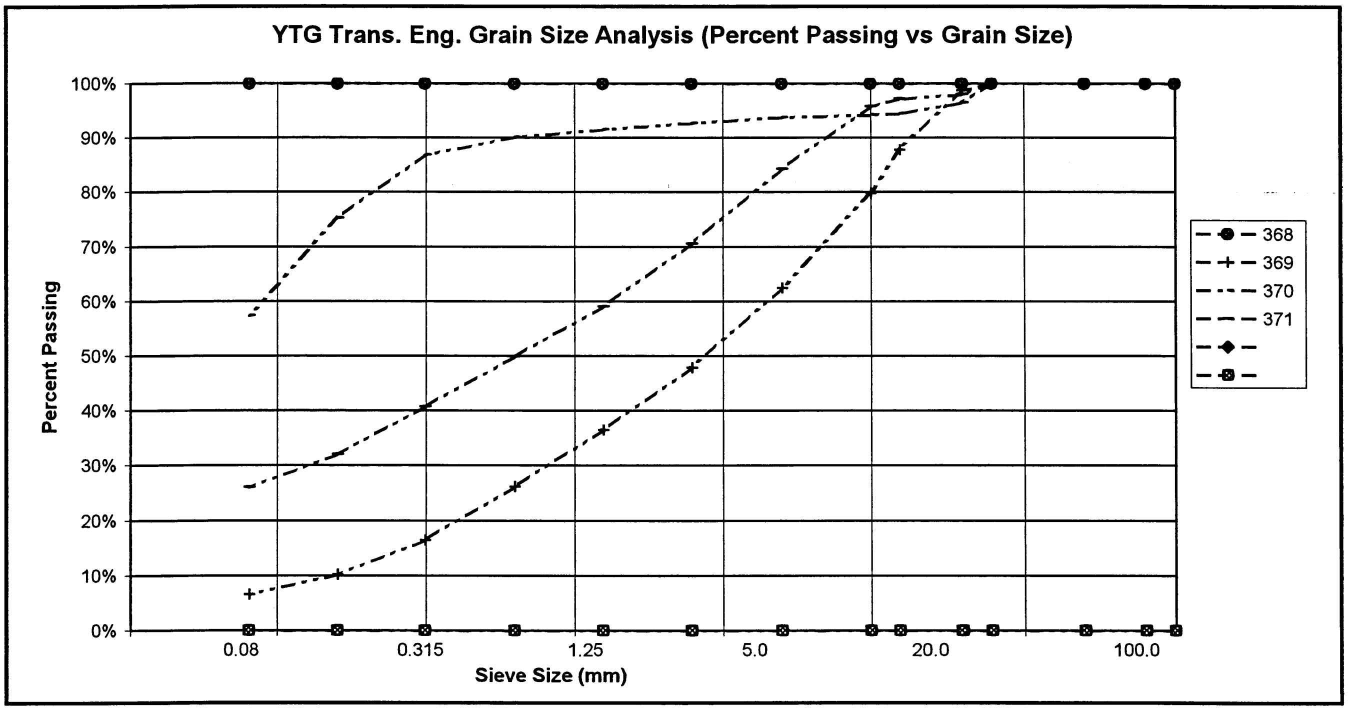
DATE COMP: 2000/05/17

FIELD NO:	365	366	367			
LAB NO:	668	669	670			
DEPTH:	0.9-1.0	2.5-2.8	4.2-4.4			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	92%	89%			
20.0	100%	90%	87%			
12.5	100%	85%	80%			
10.0	100%	83%	76%			
5.0	100%	77%	64%			
2.5	95%	70%	56%			
1.25	94%	65%	49%			
0.630	92%	58%	44%			
0.315	91%	47%	39%			
0.160	87%	34%	34%			
0.080	74%	24%	29%			
M.C.(%):	39%	6%	9%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	0	23	36			
% SAND:	26	54	35			
% FINES:	74	24	29			
CLASSIFICATION	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)			



PROJECT NUMBER:	092-202101-0361-1	HOLE No.:	544-1394
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1749+780 CL		
LOGGED BY:	W.E.	DATE COMP:	2000/05/17

FIELD NO:	368	369	370	371		
LAB NO:	LOST	672	673	674		
DEPTH:	0.6-1.0	1.9-2.1	3.0-3.2	4.7-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	99%	96%	98%		
12.5	100%	88%	95%	97%		
10.0	100%	80%	94%	96%		
5.0	100%	62%	94%	84%		
2.5	100%	48%	93%	71%		
1.25	100%	36%	92%	59%		
0.630	100%	26%	90%	50%		
0.315	100%	16%	87%	41%		
0.160	100%	10%	75%	32%		
0.080	100%	7%	57%	26%		
M.C.(%):	14%	2%	18%	6%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	38	6	16		
% SAND:	0	56	36	58		
% FINES:	100	7	57	26		
CLASSIFICATION	~~SILT~~(ML)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)		

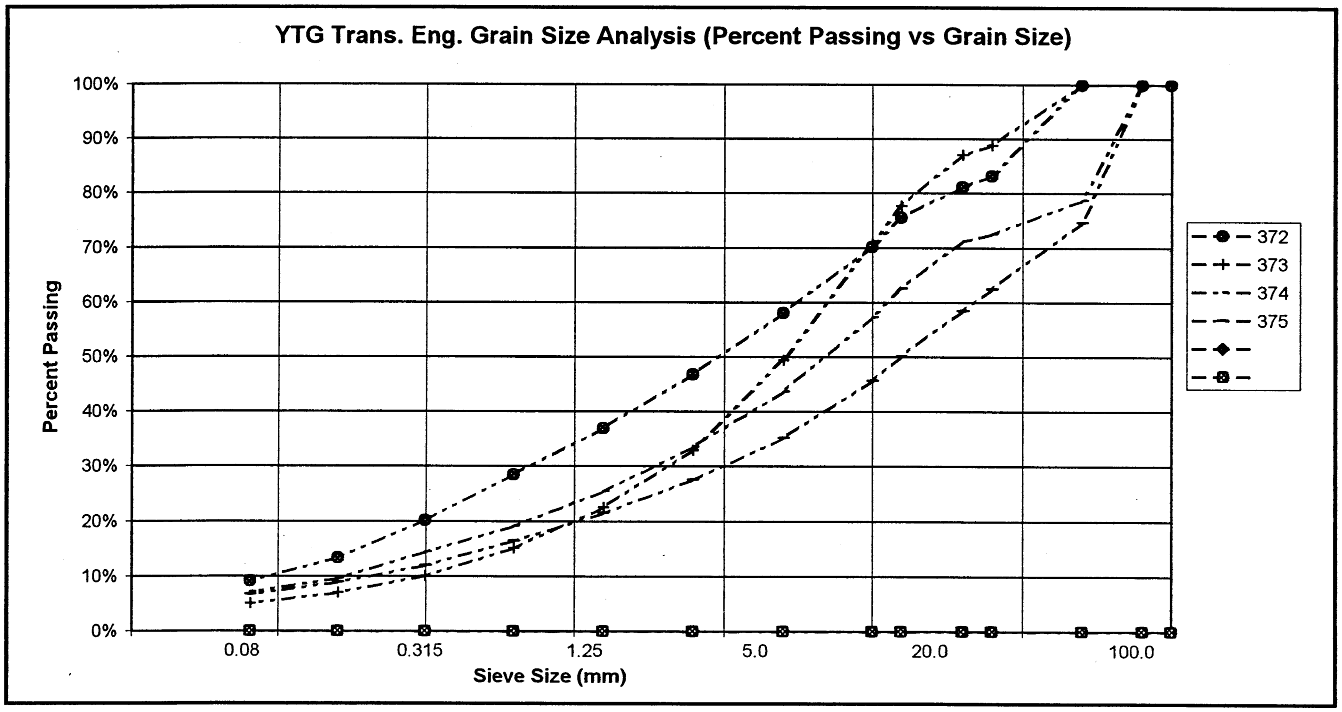


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1749+900 CL
LOGGED BY: W.E.

HOLE No.: 544-1395

DATE COMP: 2000/05/17

FIELD NO:	372	373	374	375		
LAB NO:	675	676	677	678		
DEPTH:	1.4-1.6	2.3-2.5	3.0-3.2	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	79%	75%		
25.0	83%	89%	73%	62%		
20.0	81%	87%	71%	58%		
12.5	76%	78%	63%	50%		
10.0	70%	71%	57%	46%		
5.0	58%	49%	44%	35%		
2.5	47%	33%	34%	28%		
1.25	37%	22%	25%	21%		
0.630	29%	15%	19%	16%		
0.315	20%	10%	14%	12%		
0.160	13%	7%	10%	9%		
0.080	9%	5%	7%	7%		
M.C.(%):	4%	2%	3%	2%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	42	51	56	65		
% SAND:	49	44	36	29		
% FINES:	9	5	7	7		
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		



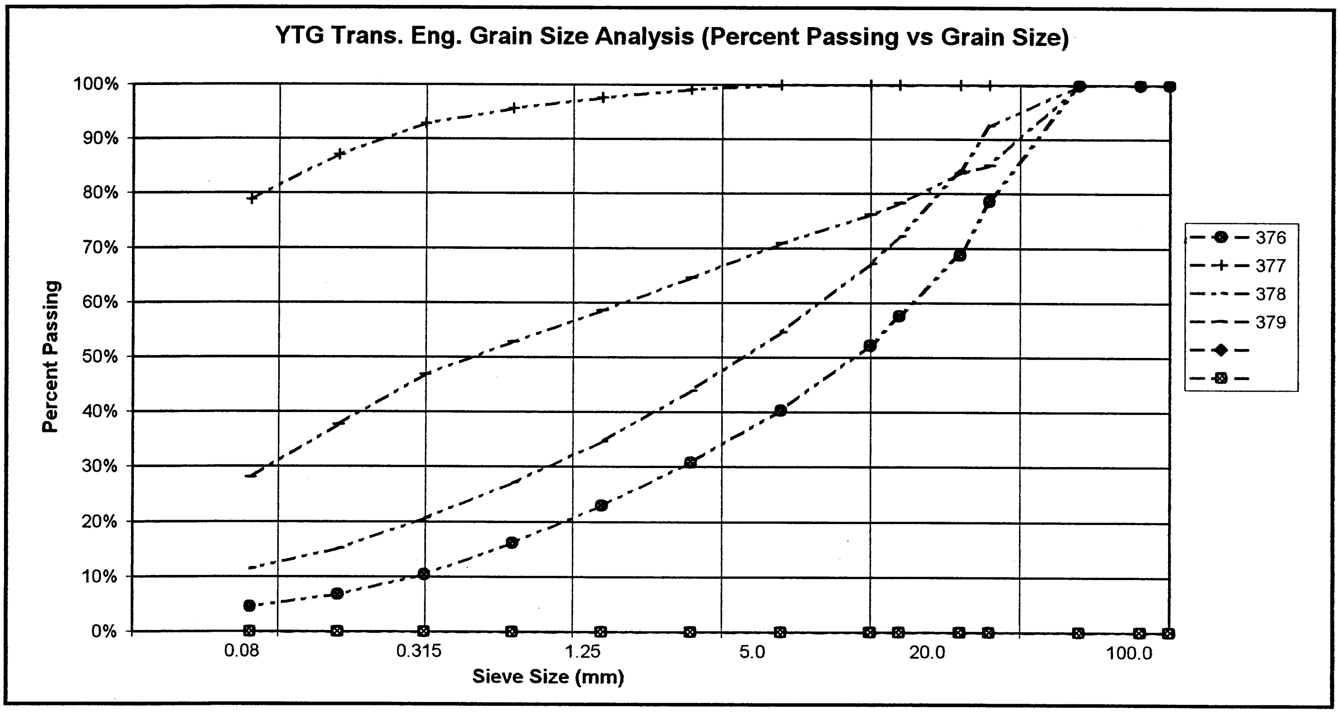
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1750+000 CL
LOGGED BY: W.E.

HOLE No.: 544-1396

DATE COMP: 2000/05/17

FIELD NO:	376	377	378	379		
LAB NO:	679	680	681	682		
DEPTH:	1.4-1.6	2.0-2.4	3.0-3.2	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	79%	100%	92%	85%		
20.0	69%	100%	84%	84%		
12.5	58%	100%	72%	78%		
10.0	52%	100%	67%	76%		
5.0	40%	100%	55%	71%		
2.5	31%	99%	44%	65%		
1.25	23%	98%	35%	59%		
0.630	16%	96%	27%	53%		
0.315	10%	93%	21%	47%		
0.160	7%	87%	15%	38%		
0.080	5%	79%	11%	28%		
M.C.(%):	2%	40%	4%	7%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	60	0	45	29		
% SAND:	36	21	43	43		
% FINES:	5	79	11	28		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	SILT WITH SAND (ML)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)		



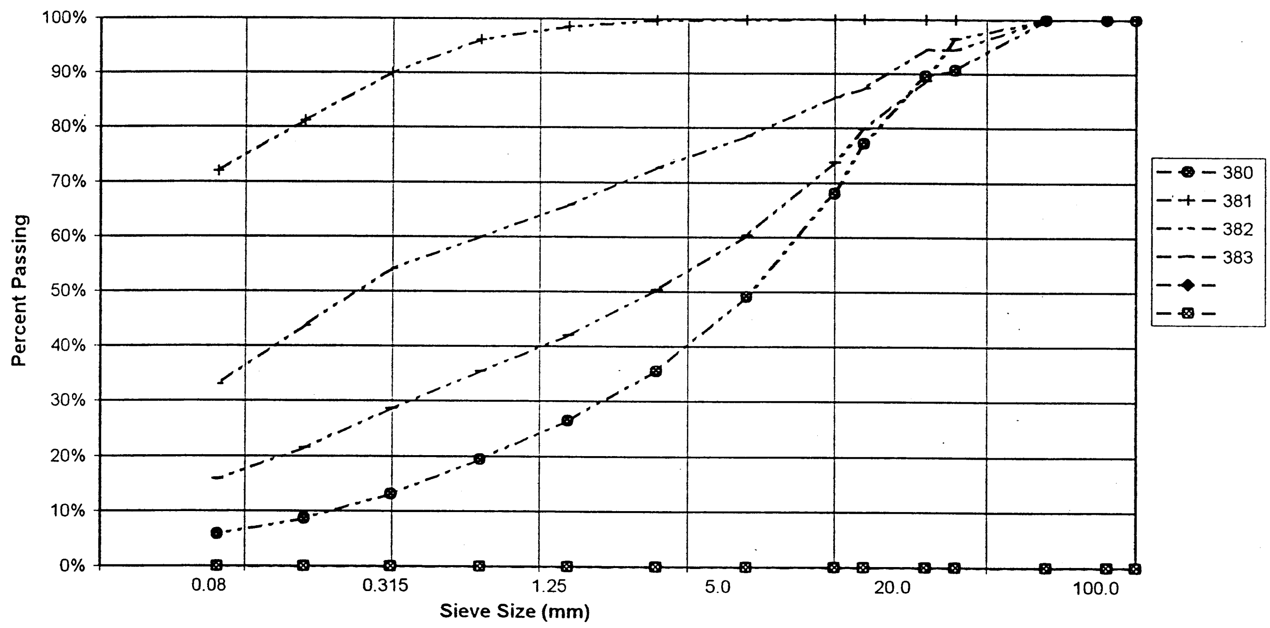
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1750+100 CL
LOGGED BY: W.E.

HOLE No.: 544-1397

DATE COMP: 2000/05/17

FIELD NO:	380	381	382	383		
LAB NO:	683	684	685	686		
DEPTH:	1.1-1.3	2.0-2.2	3.0-3.2	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	91%	100%	94%	96%		
20.0	90%	100%	94%	89%		
12.5	77%	100%	87%	80%		
10.0	68%	100%	86%	74%		
5.0	49%	100%	79%	60%		
2.5	36%	100%	73%	50%		
1.25	27%	99%	66%	42%		
0.630	19%	96%	60%	35%		
0.315	13%	90%	54%	29%		
0.160	9%	81%	44%	21%		
0.080	6%	72%	33%	16%		
M.C.(%):	2%	37%	11%	4%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	51	0	21	40		
% SAND:	43	28	46	44		
% FINES:	6	72	33	16		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

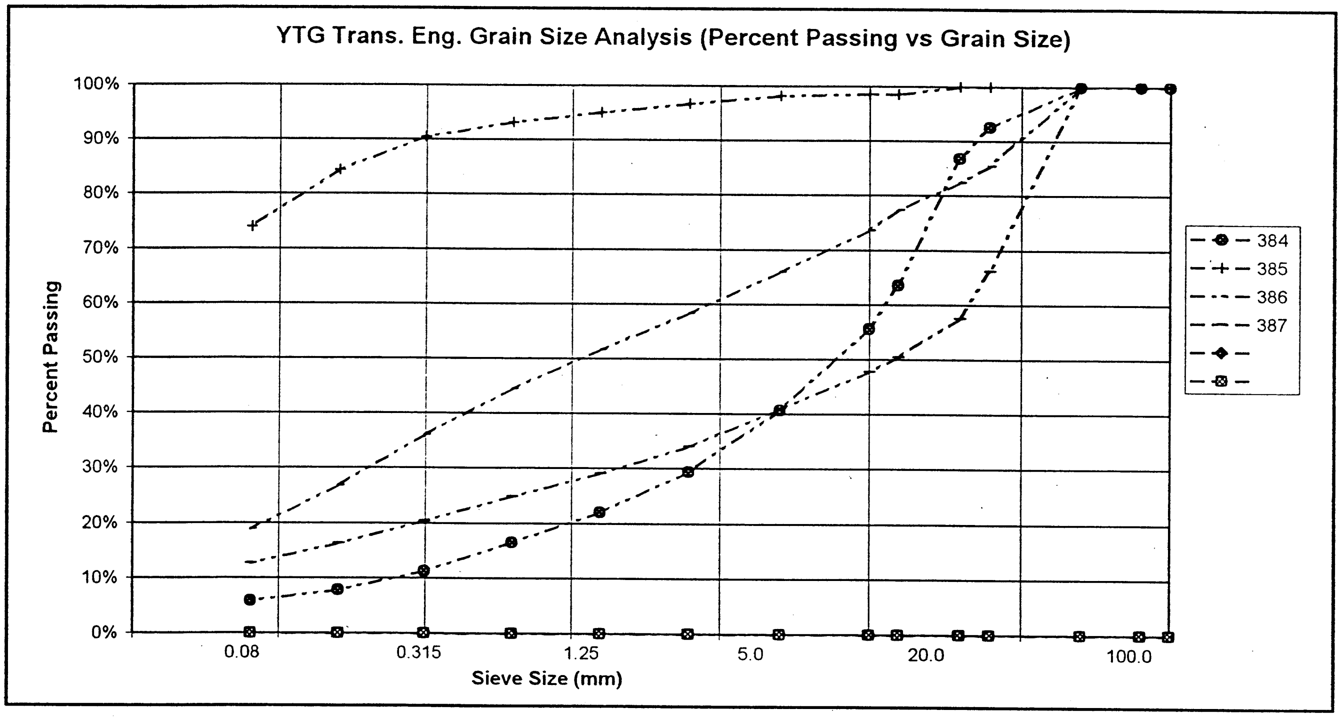


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1750+200 15M LT
LOGGED BY: W.E.

HOLE No.: 544-1398

DATE COMP: 2000/05/17

FIELD NO:	384	385	386	387		
LAB NO:	687	688	689	690		
DEPTH:	1.4-1.6	2.0-2.4	3.0-3.2	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	93%	100%	85%	66%		
20.0	87%	100%	82%	57%		
12.5	64%	99%	77%	50%		
10.0	56%	99%	74%	48%		
5.0	41%	98%	66%	41%		
2.5	29%	97%	58%	34%		
1.25	22%	95%	52%	29%		
0.630	17%	93%	44%	25%		
0.315	11%	91%	36%	20%		
0.160	8%	84%	27%	16%		
0.080	6%	74%	19%	13%		
M.C.(%):	2%	24%	7%	5%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	59	2	34	59		
% SAND:	35	24	47	28		
% FINES:	6	74	19	13		
CLASSIFICATION	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)		



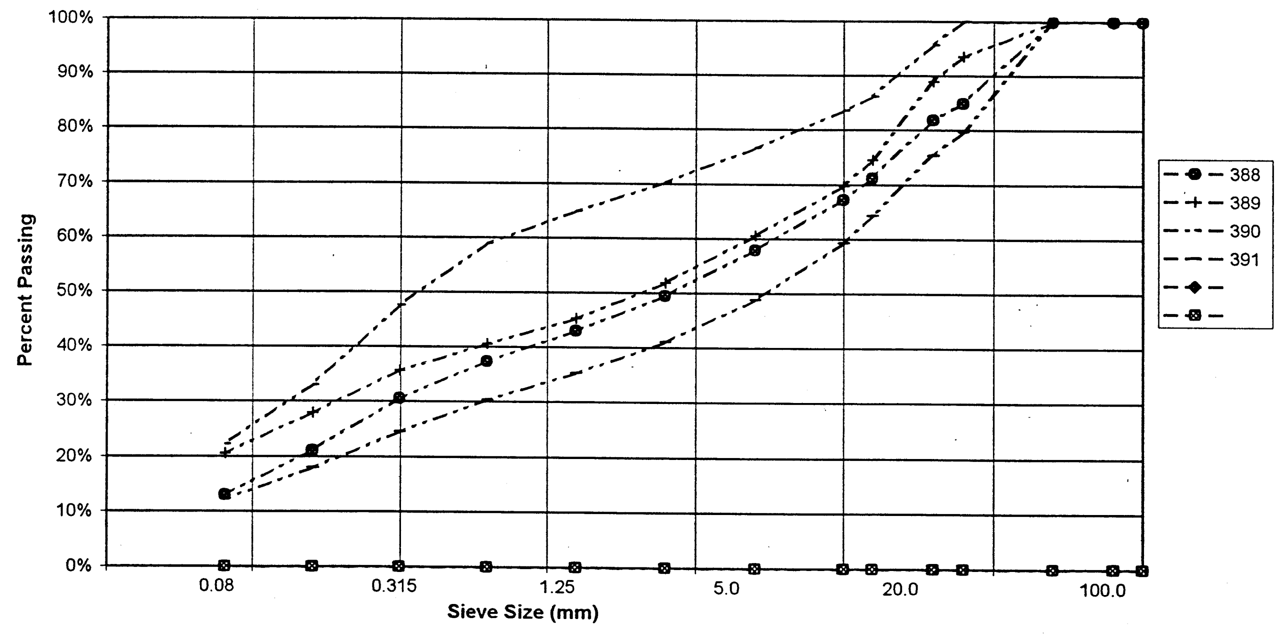
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1750+240 15M RT
LOGGED BY: W.E.

HOLE No.: 544-1399

DATE COMP: 2000/05/17

FIELD NO:	388	389	390	391		
LAB NO:	691	692	693	694		
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	4.4-4.6		
TYPE:	AUGER	#N/A	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	85%	94%	100%	80%		
20.0	82%	89%	96%	75%		
12.5	71%	75%	86%	64%		
10.0	67%	70%	84%	59%		
5.0	58%	61%	77%	49%		
2.5	49%	52%	70%	41%		
1.25	43%	45%	65%	35%		
0.630	37%	41%	59%	30%		
0.315	31%	36%	48%	25%		
0.160	21%	28%	33%	18%		
0.080	13%	21%	22%	12%		
M.C.(%):	3%	5%	7%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	42	39	23	51		
% SAND:	45	40	54	37		
% FINES:	13	21	22	12		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

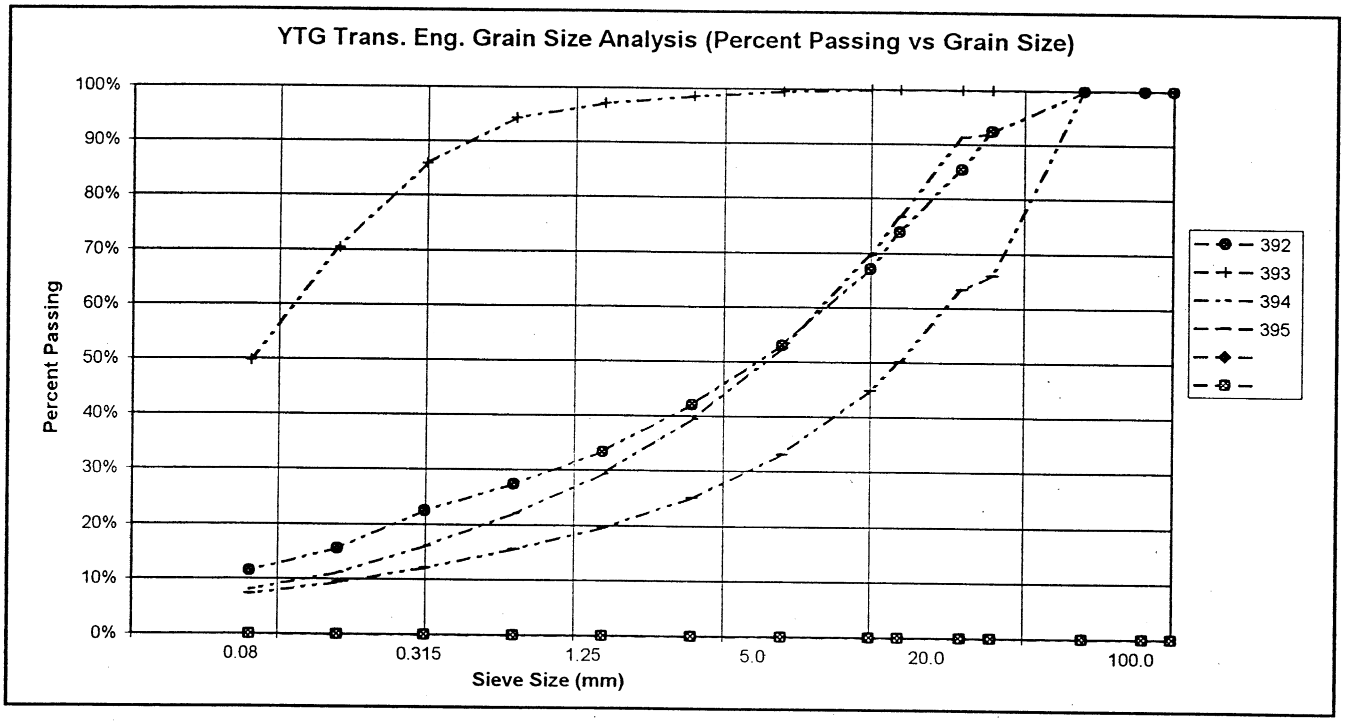


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1750+300 CL
LOGGED BY: W.E.

HOLE No.: 544-1400

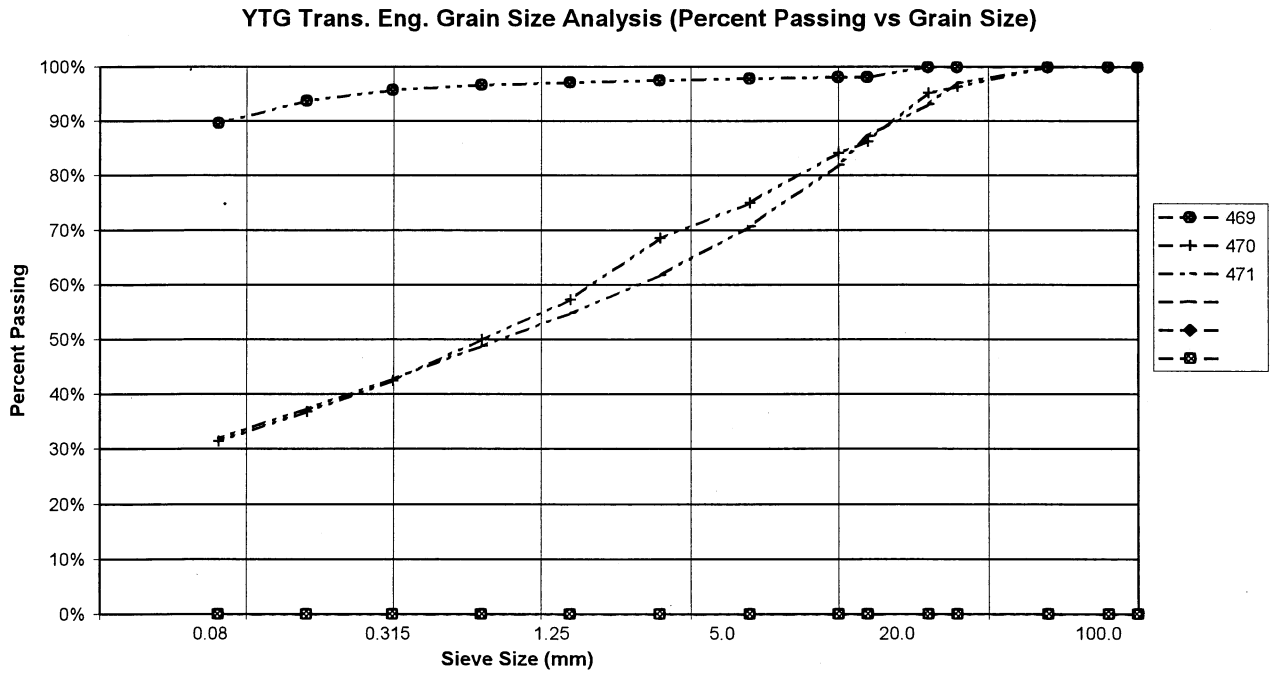
DATE COMP: 2000/05/17

FIELD NO:	392	393	394	395		
LAB NO:	695	696	697	698		
DEPTH:	1.4-1.6	2.0-2.2	2.9-3.1	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	92%	100%	92%	66%		
20.0	85%	100%	91%	63%		
12.5	74%	100%	77%	50%		
10.0	67%	100%	70%	45%		
5.0	53%	100%	52%	33%		
2.5	42%	99%	39%	25%		
1.25	33%	97%	29%	20%		
0.630	28%	94%	22%	16%		
0.315	22%	86%	16%	12%		
0.160	16%	70%	11%	9%		
0.080	11%	50%	8%	7%		
M.C.(%):	2%	25%	3%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	47	0	48	67		
% SAND:	42	50	44	26		
% FINES:	11	50	8	7		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND (SM)	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		



PROJECT NUMBER: 092-202101-0361-1
HOLE No.: 611-287
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1742+832 19M LT
LOGGED BY: D.T.
DATE COMP: 2001/07/27

FIELD NO:	469	470	471			
LAB NO:	1215	1216	1217			
DEPTH:	1.3-1.4	2.6-2.7	4.4-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	96%	97%			
20.0	100%	95%	93%			
12.5	98%	86%	87%			
10.0	98%	84%	82%			
5.0	98%	75%	71%			
2.5	97%	69%	62%			
1.25	97%	57%	55%			
0.630	97%	50%	49%			
0.315	96%	42%	43%			
0.160	94%	37%	37%			
0.080	90%	31%	32%			
M.C.(%):	33%	8%	9%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	2	25	29			
% SAND:	8	44	39			
% FINES:	90	31	32			
CLASSIFICATION	SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			

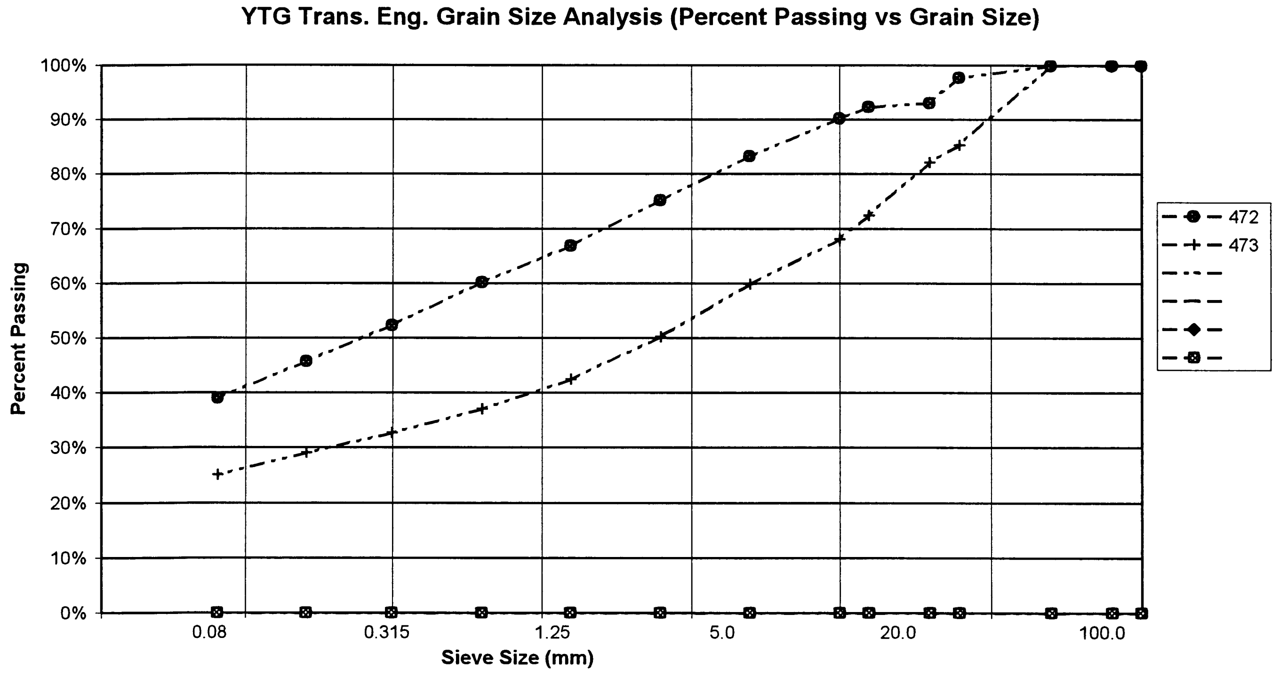


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1742+775 12M LT
LOGGED BY: D.T.

HOLE No.: 611-288

DATE COMP: 2001/07/27

FIELD NO:	472	473				
LAB NO:	1218	1219				
DEPTH:	0.8-1.0	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	98%	85%				
20.0	93%	82%				
12.5	92%	72%				
10.0	90%	68%				
5.0	83%	60%				
2.5	75%	50%				
1.25	67%	42%				
0.630	60%	37%				
0.315	52%	33%				
0.160	46%	29%				
0.080	39%	25%				
M.C.(%):	8%	5%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	17	40				
% SAND:	44	35				
% FINES:	39	25				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)				



YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

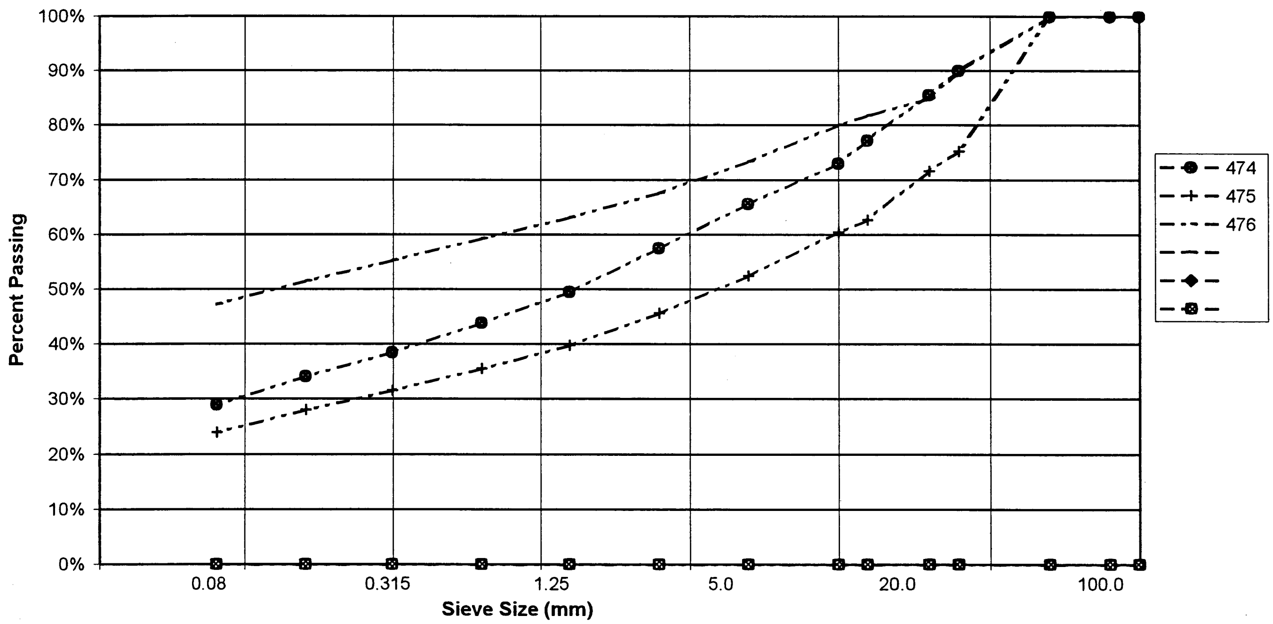
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION:. 1742+764 16M LT
LOGGED BY: D.T.

HOLE No.: 611-289

DATE COMP: 2001/07/27

FIELD NO:	474	475	476			
LAB NO:	1220	1221	1222			
DEPTH:	1.5-1.7	2.9-3.1	5.7-6.0			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	90%	75%	90%			
20.0	86%	72%	85%			
12.5	77%	63%	82%			
10.0	73%	60%	80%			
5.0	66%	52%	73%			
2.5	57%	46%	68%			
1.25	50%	40%	63%			
0.630	44%	36%	59%			
0.315	39%	32%	55%			
0.160	34%	28%	52%			
0.080	29%	24%	47%			
M.C.(%):	7%	5%	8%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	34	48	27			
% SAND:	37	28	26			
% FINES:	29	24	47			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)			

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

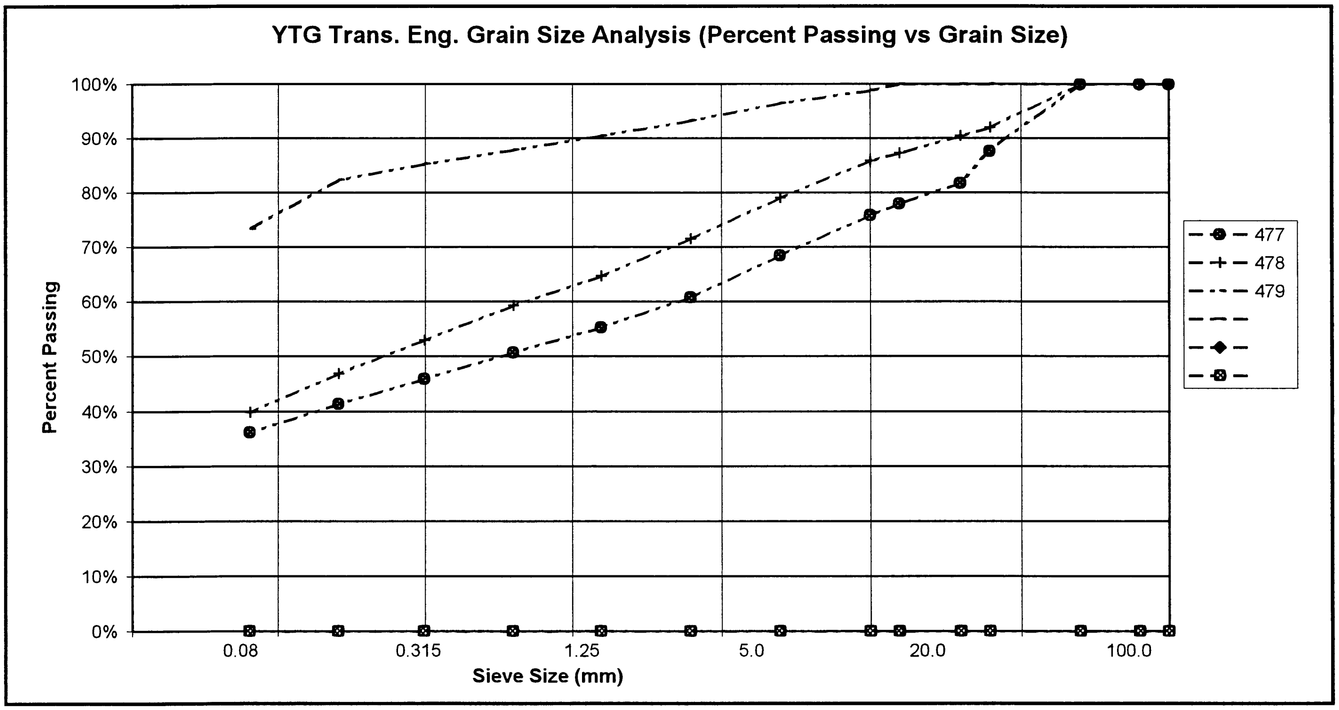


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1742+623 16M LT
LOGGED BY: D.T.

HOLE No.: 611-290

DATE COMP: 2001/07/27

FIELD NO:	477	478	479			
LAB NO:	1223	1224	1225			
DEPTH:	1.4-1.6	3.0-3.2	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	88%	92%	100%			
20.0	82%	90%	100%			
12.5	78%	87%	100%			
10.0	76%	86%	99%			
5.0	68%	79%	97%			
2.5	61%	72%	93%			
1.25	55%	65%	90%			
0.630	51%	59%	88%			
0.315	46%	53%	85%			
0.160	41%	47%	82%			
0.080	36%	40%	73%			
M.C.(%):	8%	8%	12%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	32	21	3			
% SAND:	32	39	23			
% FINES:	36	40	73			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILT WITH SAND (ML)			



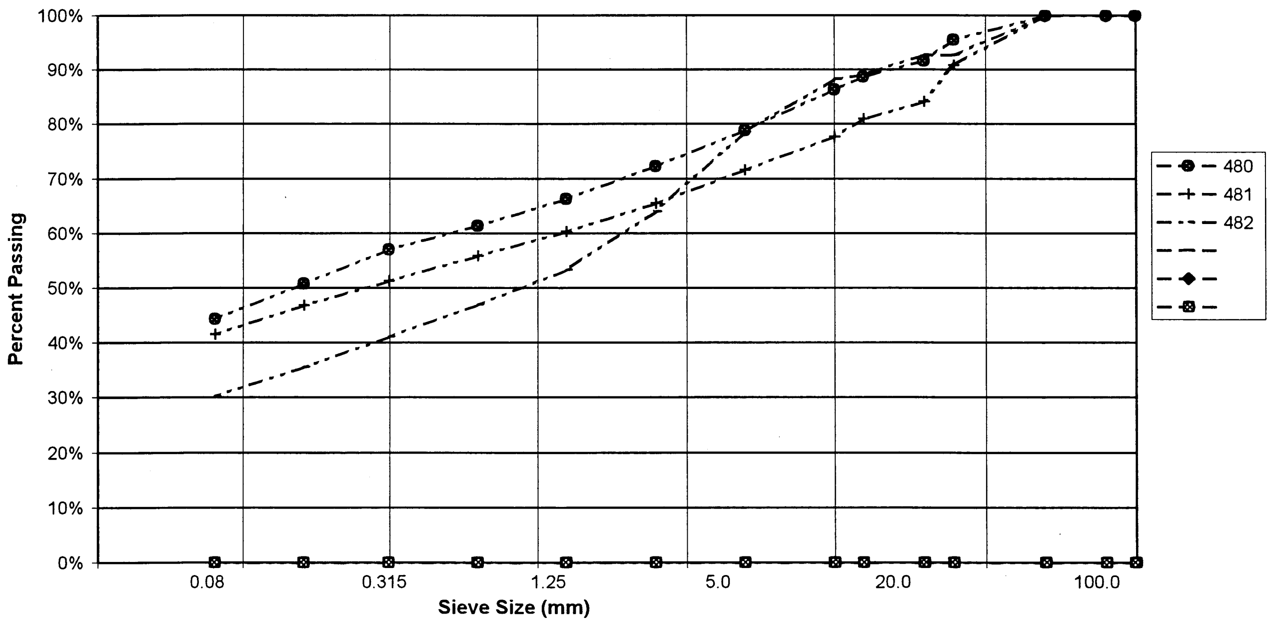
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1742+550 17M LT
LOGGED BY: D.T.

HOLE No.: 611-291

DATE COMP: 2001/07/27

FIELD NO:	480	481	482			
LAB NO:	1226	1227	1228			
DEPTH:	1.3-1.5	2.9-3.1	5.8-6.0			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	96%	91%	93%			
20.0	92%	84%	93%			
12.5	89%	81%	89%			
10.0	86%	78%	88%			
5.0	79%	72%	79%			
2.5	72%	65%	64%			
1.25	66%	60%	53%			
0.630	61%	56%	47%			
0.315	57%	51%	41%			
0.160	51%	47%	36%			
0.080	44%	42%	30%			
M.C.(%):	9%	8%	7%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	21	28	21			
% SAND:	34	30	48			
% FINES:	44	42	30			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

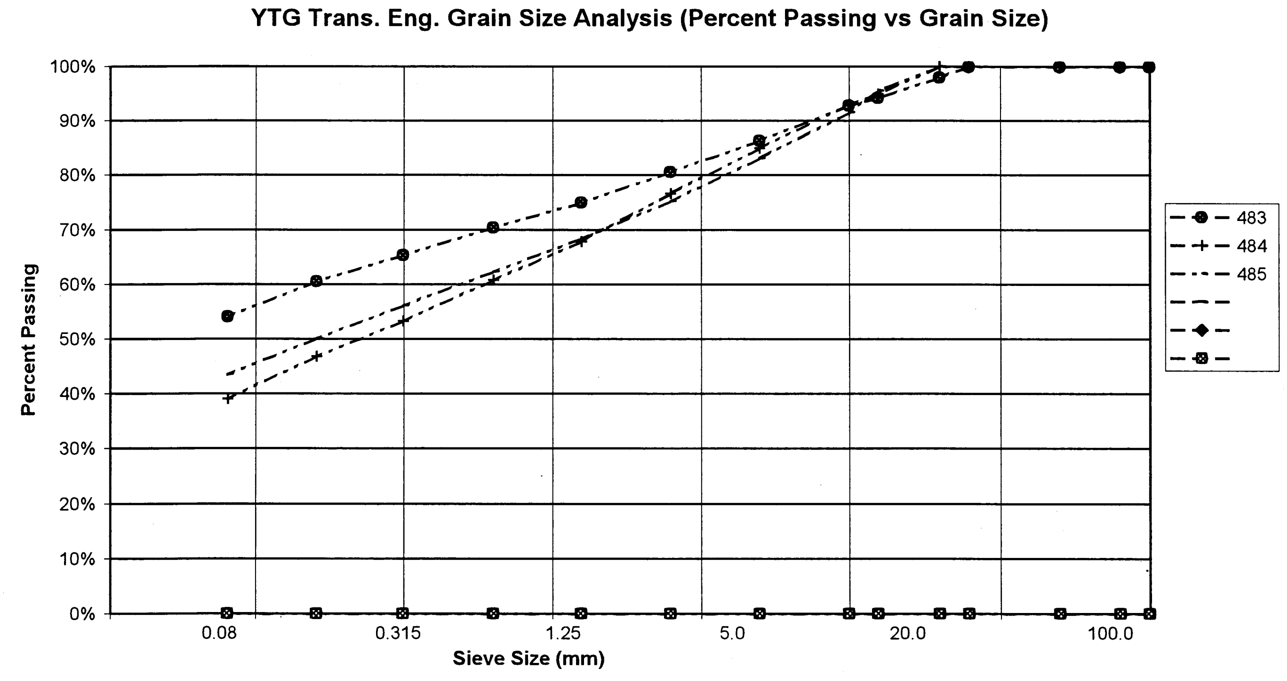


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1742+450 22M LT
LOGGED BY: D.T.

HOLE No.: 611-292

DATE COMP: 2001/07/27

FIELD NO:	483	484	485			
LAB NO:	1229	1230	1231			
DEPTH:	1.3-1.5	2.9-3.1	5.8-6.0			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	98%	100%	100%			
12.5	94%	95%	96%			
10.0	93%	93%	92%			
5.0	86%	85%	83%			
2.5	81%	77%	75%			
1.25	75%	68%	68%			
0.630	70%	61%	62%			
0.315	65%	53%	56%			
0.160	61%	47%	50%			
0.080	54%	39%	44%			
M.C.(%):	13%	8%	9%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	14	15	17			
% SAND:	32	46	40			
% FINES:	54	39	44			
CLASSIFICATION	SANDY SILT (ML)	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)			

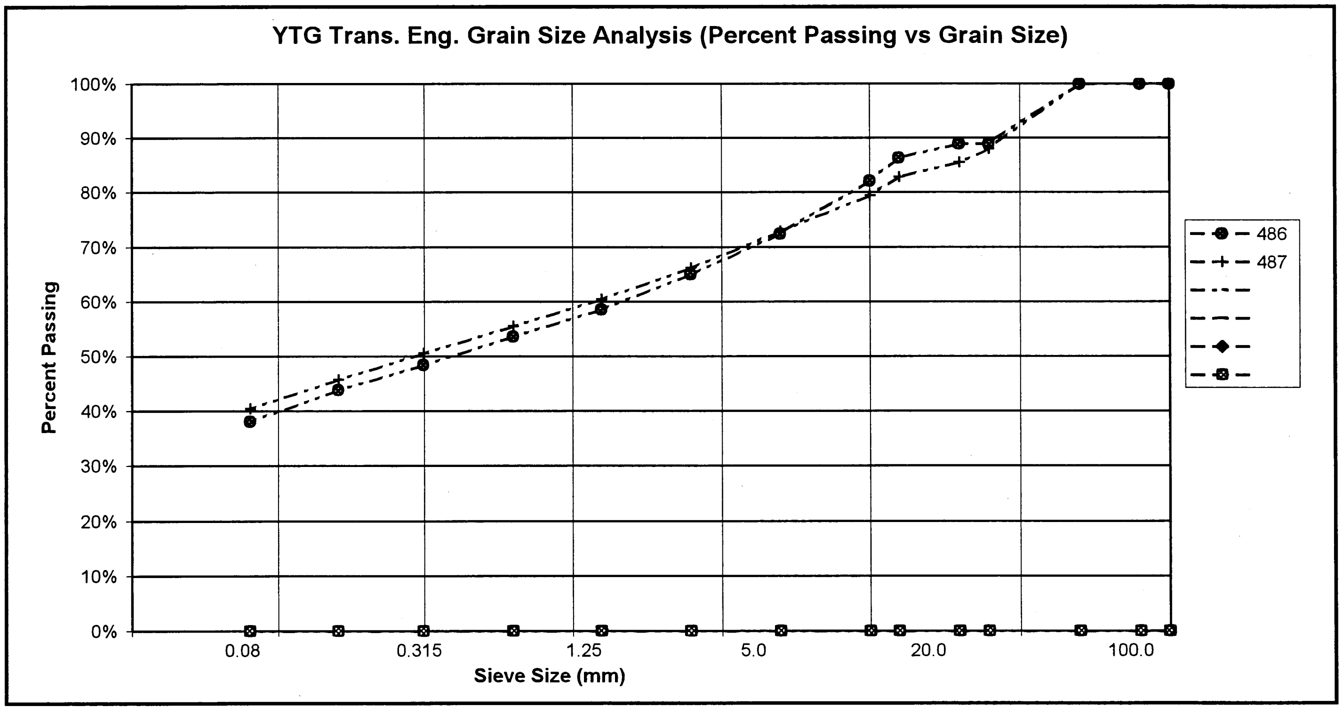


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1742+350 10 LT
LOGGED BY: D.T.

HOLE No.: 611-293

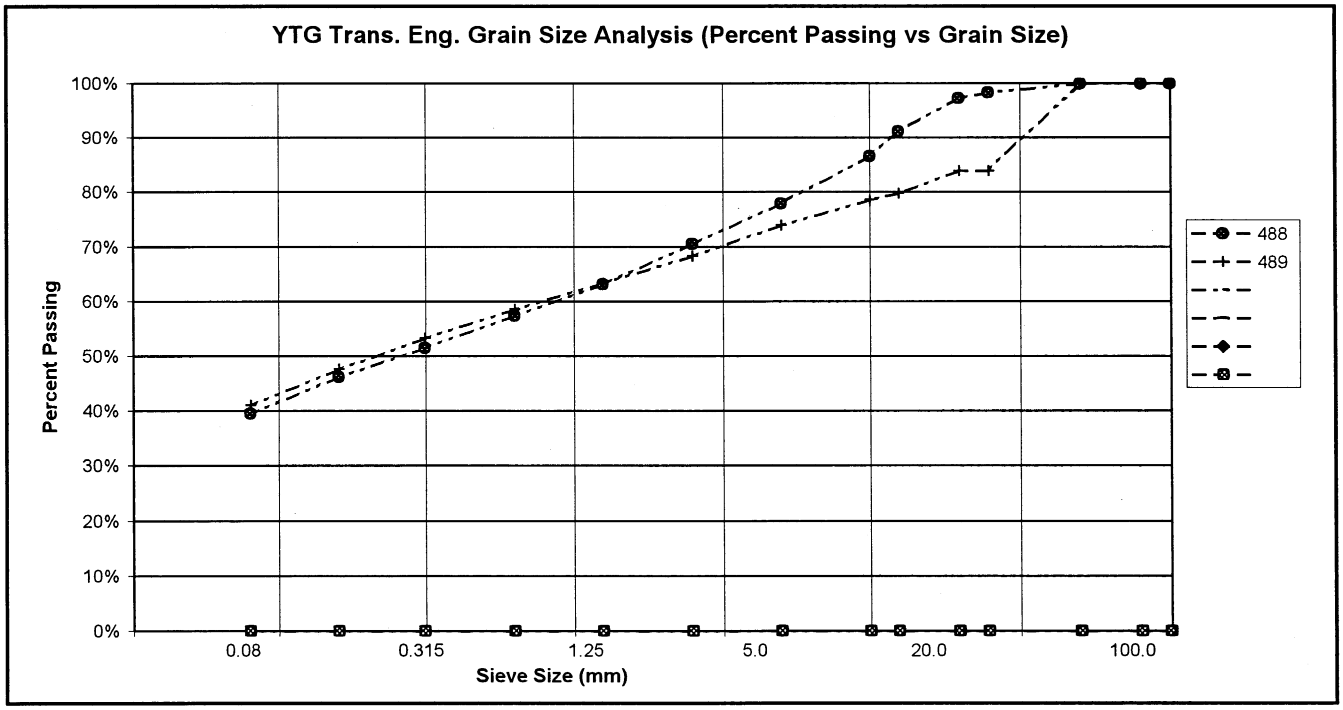
DATE COMP: 2001/07/27

FIELD NO:	486	487				
LAB NO:	1232	1233				
DEPTH:	1.3-1.5	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	89%	88%				
20.0	89%	86%				
12.5	86%	83%				
10.0	82%	80%				
5.0	72%	73%				
2.5	65%	66%				
1.25	59%	60%				
0.630	54%	56%				
0.315	49%	51%				
0.160	44%	46%				
0.080	38%	41%				
M.C.(%):	9%	10%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	28	27				
% SAND:	34	32				
% FINES:	38	41				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)				


YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
HOLE No.: 611-294
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1742+275 20m lt
LOGGED BY: D.T.
DATE COMP: 2001/07/27

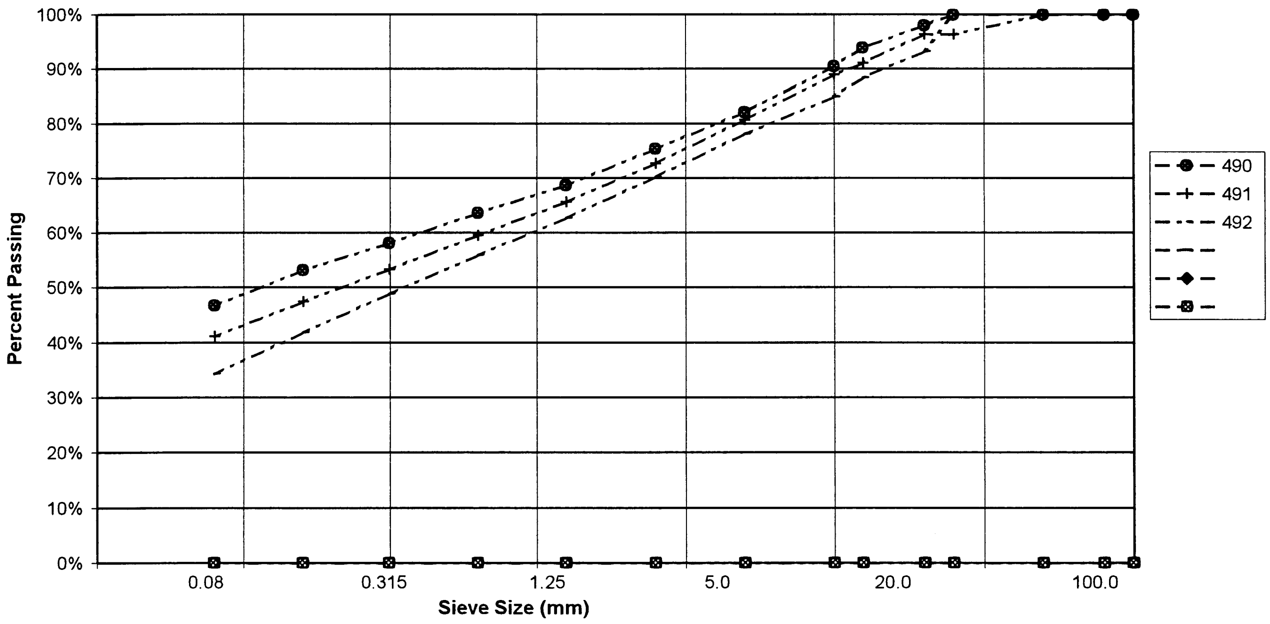
FIELD NO:	488	489				
LAB NO:	1234	1235				
DEPTH:	1.3-1.5	5.8-6.0				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	98%	84%				
20.0	97%	84%				
12.5	91%	80%				
10.0	87%	79%				
5.0	78%	74%				
2.5	71%	68%				
1.25	63%	63%				
0.630	57%	59%				
0.315	52%	53%				
0.160	46%	48%				
0.080	40%	41%				
M.C.(%):	9%	7%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	22	26				
% SAND:	38	33				
% FINES:	40	41				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)				



PROJECT NUMBER: 092-202101-0361-1 HOLE No.: 611-295
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1742+204 11M LT
LOGGED BY: D.T. DATE COMP: 2001/07/27

FIELD NO:	490	491	492			
LAB NO:	1236	1237	1238			
DEPTH:	1.2-1.4	2.9-3.1	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	96%	100%			
20.0	98%	96%	93%			
12.5	94%	91%	88%			
10.0	91%	89%	85%			
5.0	82%	81%	78%			
2.5	75%	73%	70%			
1.25	69%	66%	63%			
0.630	64%	60%	56%			
0.315	58%	53%	49%			
0.160	53%	47%	42%			
0.080	47%	41%	34%			
M.C.(%):	9%	8%	8%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	18	19	22			
% SAND:	35	40	44			
% FINES:	47	41	34			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

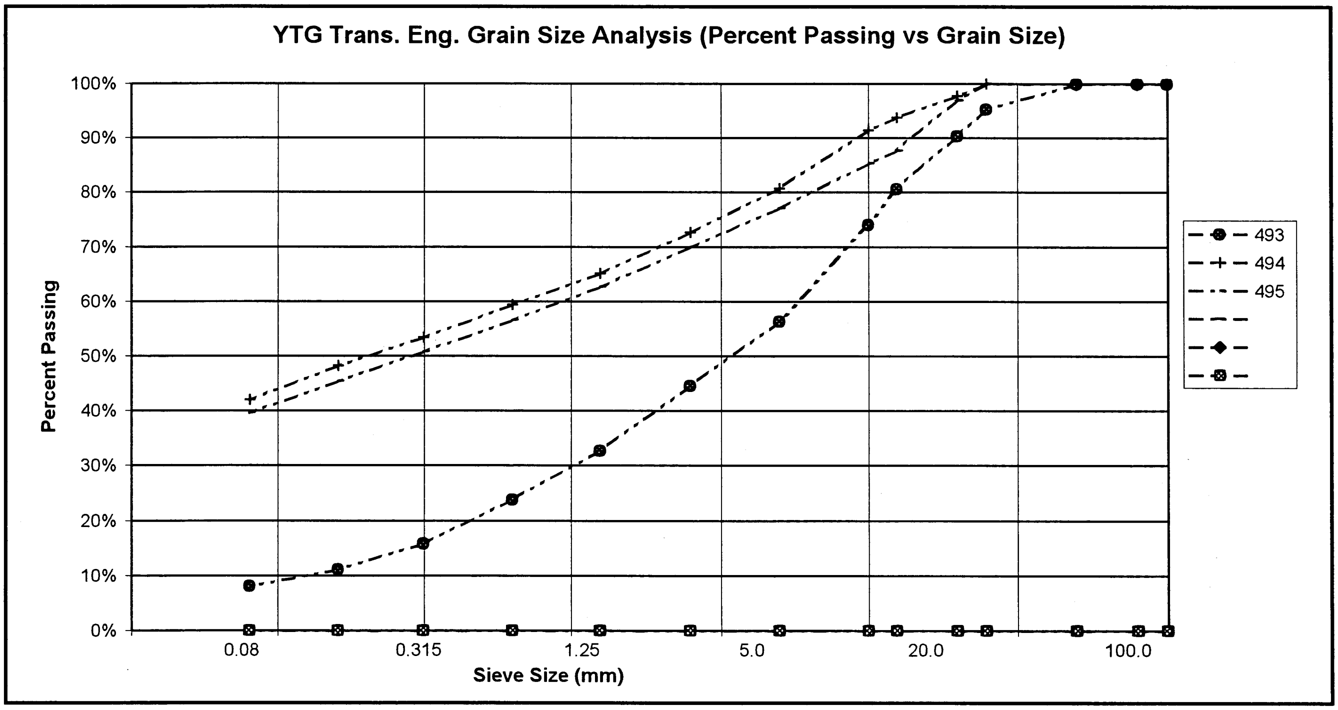


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1742+100 11M LT
LOGGED BY: D.T.

HOLE No.: 611-296

DATE COMP: 2001/07/27

FIELD NO:	493	494	495			
LAB NO:	1239	1240	1241			
DEPTH:	1.3-1.5	2.8-3.0	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	95%	100%	100%			
20.0	90%	98%	97%			
12.5	81%	94%	88%			
10.0	74%	91%	85%			
5.0	56%	81%	77%			
2.5	45%	73%	70%			
1.25	33%	65%	63%			
0.630	24%	59%	57%			
0.315	16%	53%	51%			
0.160	11%	48%	45%			
0.080	8%	42%	40%			
M.C.(%):	3%	8%	8%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	44	19	23			
% SAND:	48	39	37			
% FINES:	8	42	40			
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			

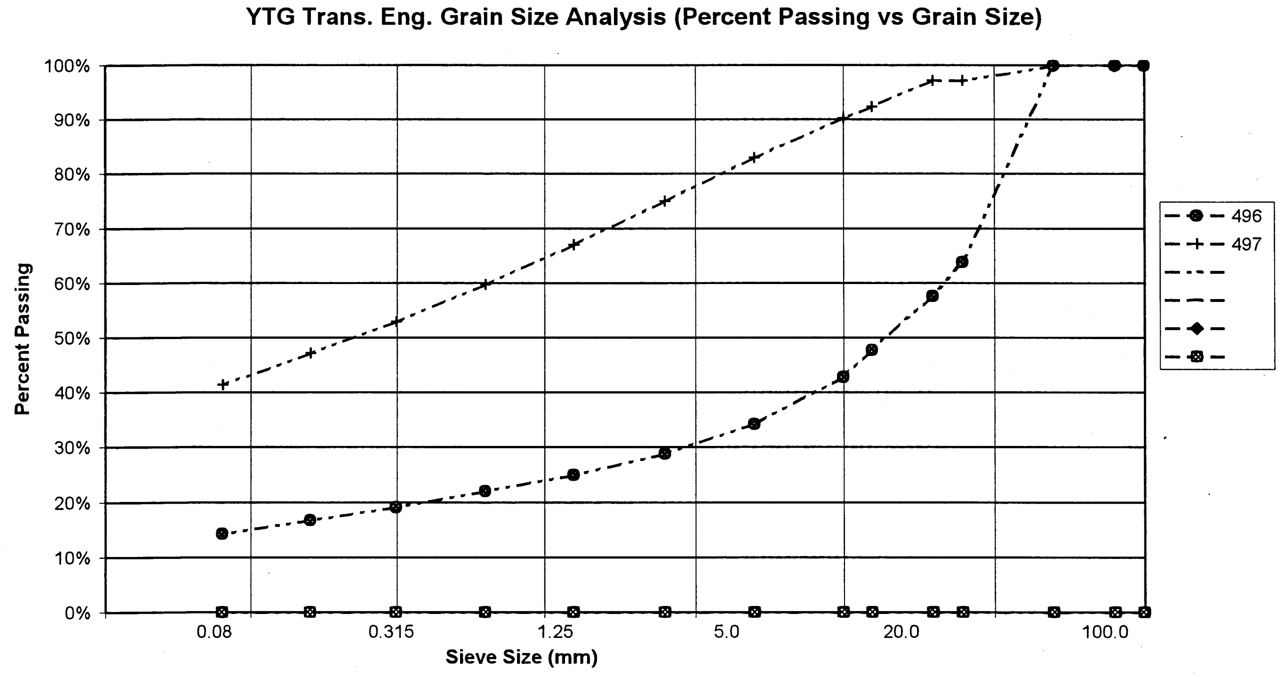


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1742+000 11 M LT
LOGGED BY: D.T.

HOLE No.: 611-297

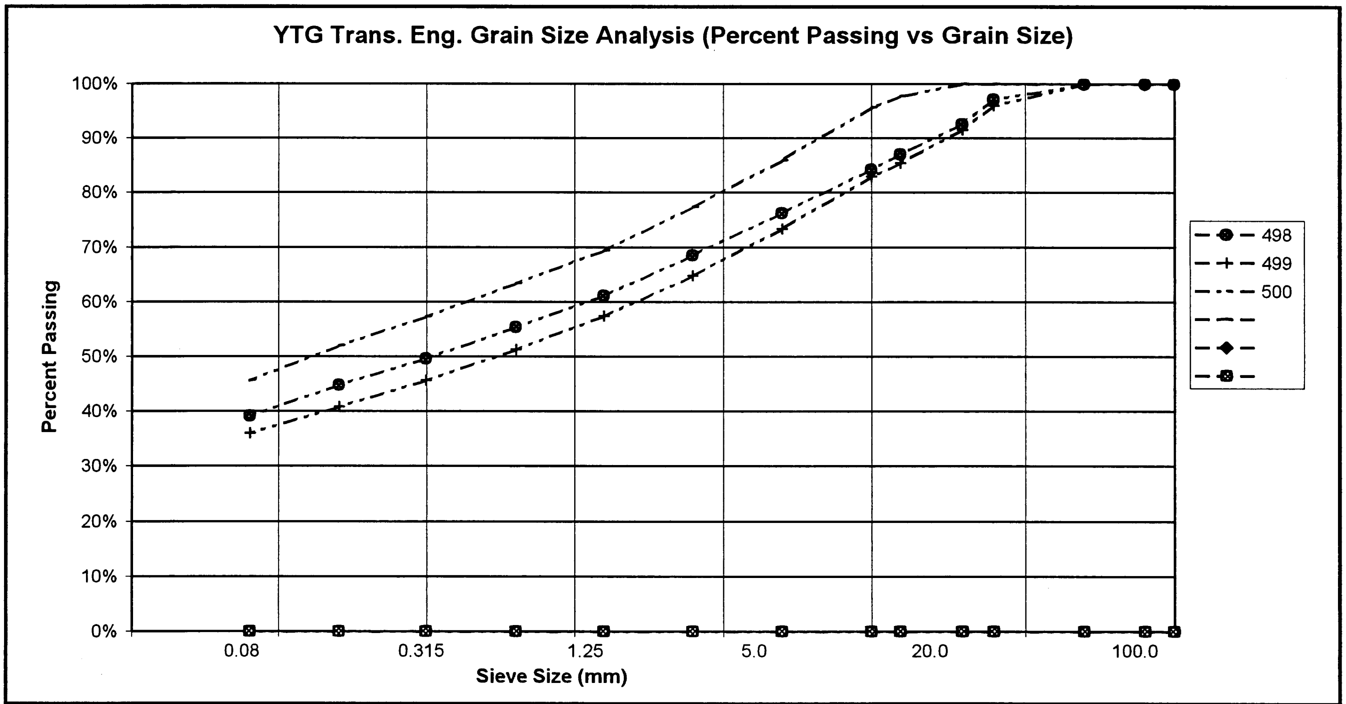
DATE COMP: 2001/07/27

FIELD NO:	496	497				
LAB NO:	1242	1243				
DEPTH:	1.2-1.4	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	64%	97%				
20.0	58%	97%				
12.5	48%	92%				
10.0	43%	90%				
5.0	34%	83%				
2.5	29%	75%				
1.25	25%	67%				
0.630	22%	60%				
0.315	19%	53%				
0.160	17%	47%				
0.080	14%	41%				
M.C.(%):	5%	8%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	66	17				
% SAND:	20	42				
% FINES:	14	41				
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)				



PROJECT NUMBER: 092-202101-0361-1
HOLE No.: 611-298
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1741+900 12M LT
LOGGED BY: D.T.
DATE COMP: 2001/07/27

FIELD NO:	498	499	500			
LAB NO:	1244	1245	1246			
DEPTH:	1.2-1.4	3.0-3.2	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	97%	96%	100%			
20.0	93%	92%	100%			
12.5	87%	85%	98%			
10.0	84%	83%	96%			
5.0	76%	73%	86%			
2.5	69%	65%	77%			
1.25	61%	57%	69%			
0.630	55%	51%	63%			
0.315	50%	46%	57%			
0.160	45%	41%	52%			
0.080	39%	36%	46%			
M.C.(%):	9%	8%	10%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	24	27	14			
% SAND:	37	37	40			
% FINES:	39	36	46			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)			

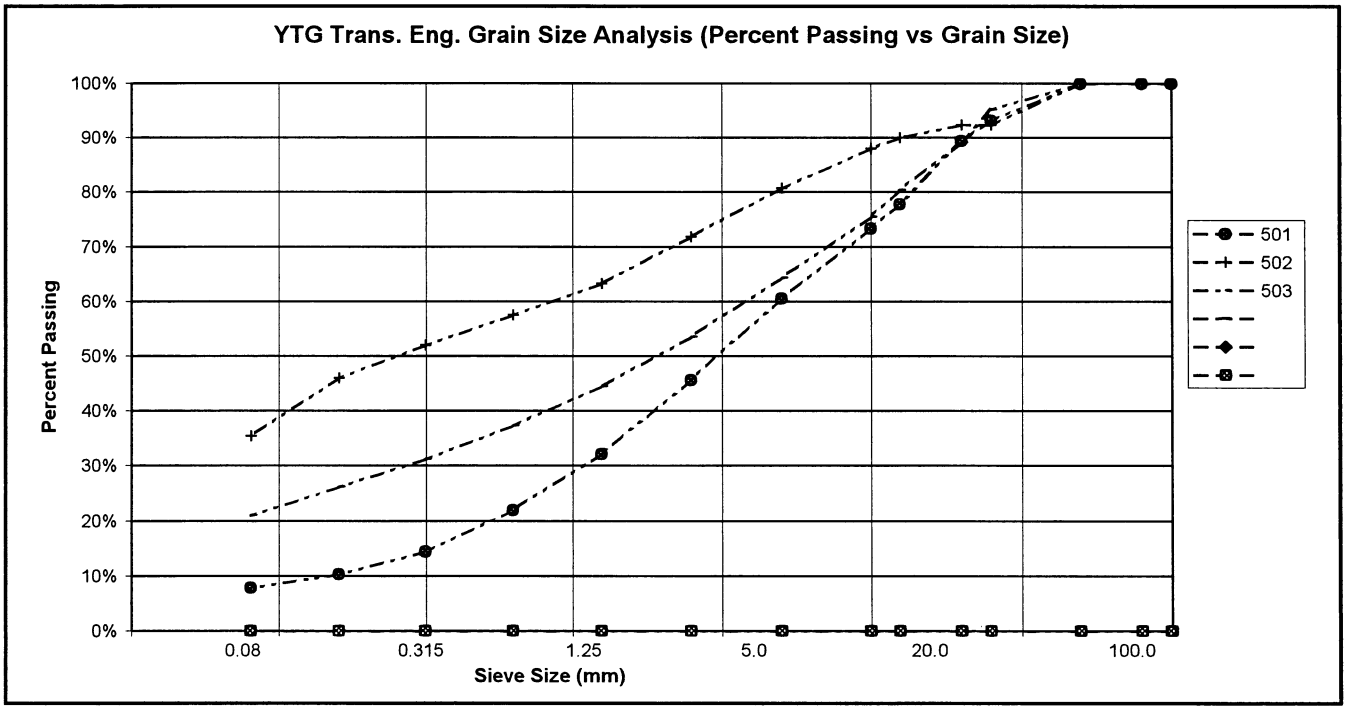


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1741+782 10M LT
LOGGED BY: D.T.

HOLE No.: 611-299

DATE COMP: 2001/07/27

FIELD NO:	501	502	503			
LAB NO:	1247	1248	1249			
DEPTH:	1.3-1.5	3.0-3.2	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	93%	92%	95%			
20.0	89%	92%	89%			
12.5	78%	90%	80%			
10.0	73%	88%	75%			
5.0	61%	81%	64%			
2.5	46%	72%	54%			
1.25	32%	63%	45%			
0.630	22%	57%	37%			
0.315	14%	52%	31%			
0.160	10%	46%	26%			
0.080	8%	35%	21%			
M.C.(%):	4%	14%	8%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	39	19	36			
% SAND:	53	45	43			
% FINES:	8	35	21			
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



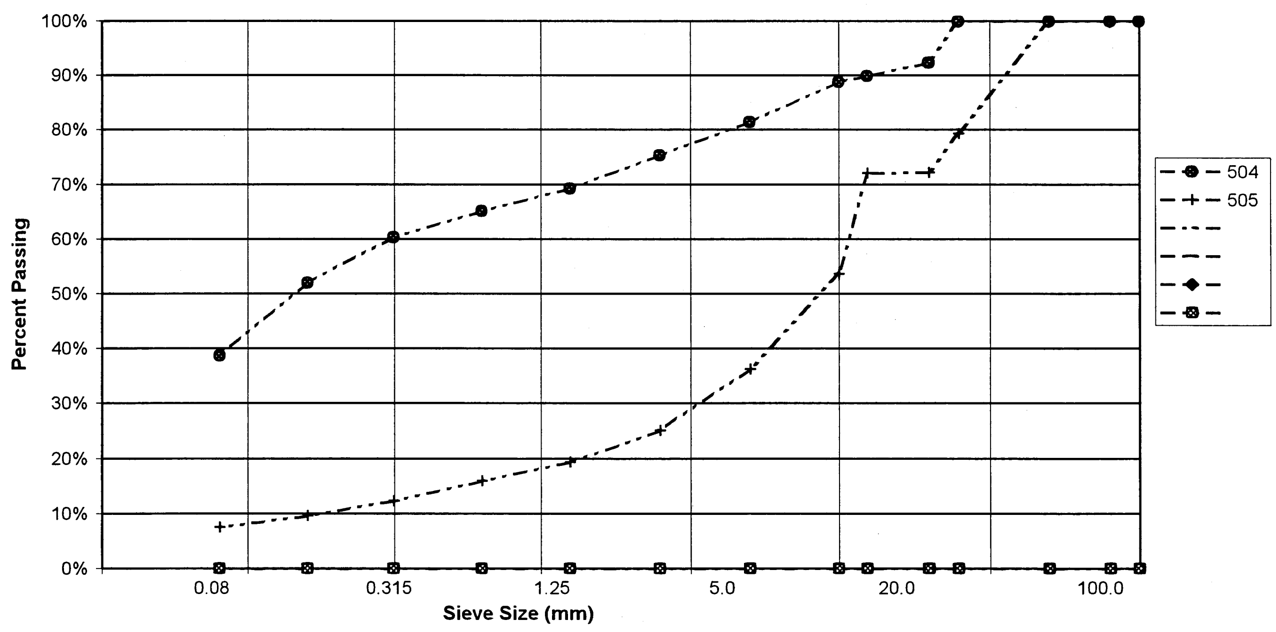
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1741+675 9M LT
LOGGED BY: D.T.

HOLE No.: 611-300

DATE COMP: 2001/07/27

FIELD NO:	504	505				
LAB NO:	1250	1251				
DEPTH:	0.8-1.0	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	79%				
20.0	92%	72%				
12.5	90%	72%				
10.0	89%	54%				
5.0	81%	36%				
2.5	75%	25%				
1.25	69%	19%				
0.630	65%	16%				
0.315	60%	12%				
0.160	52%	10%				
0.080	39%	8%				
M.C.(%):	12%	3%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	19	64				
% SAND:	43	29				
% FINES:	39	8				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)				

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

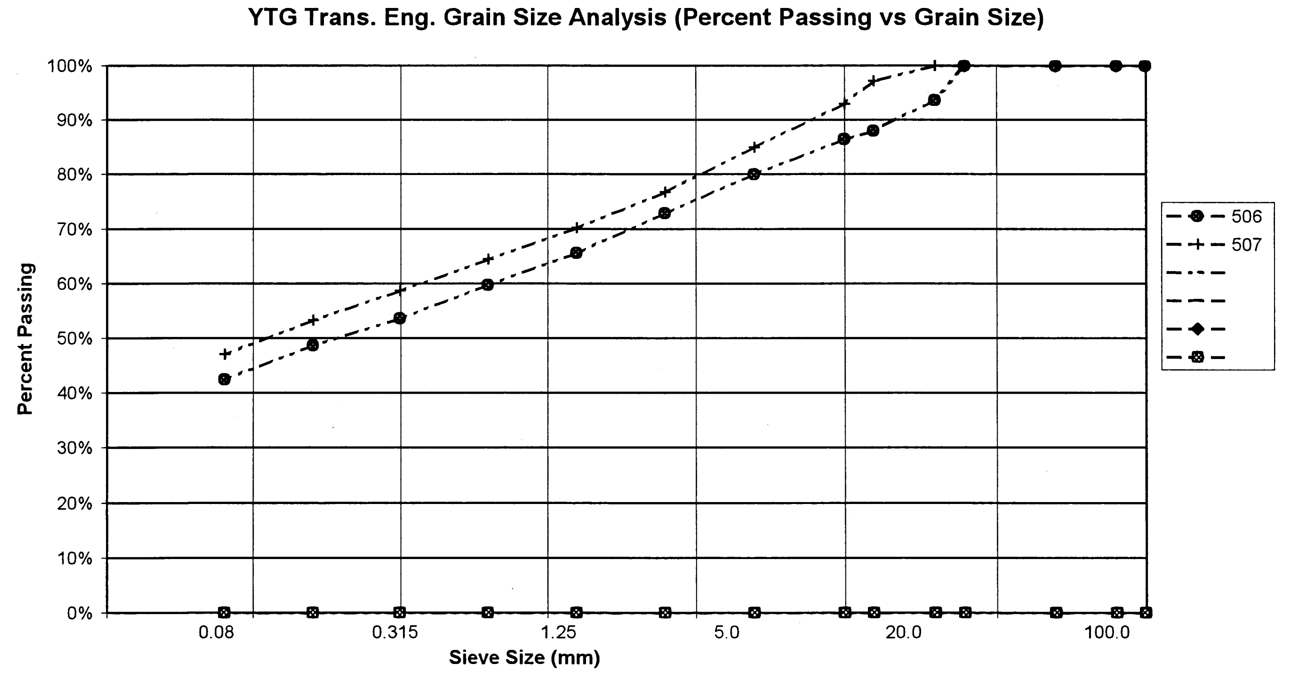


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1741+575 12M LT
LOGGED BY: D.T.

HOLE No.: 611-301

DATE COMP: 2001/07/27

FIELD NO:	506	507				
LAB NO:	1252	1253				
DEPTH:	1.3-1.5	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	100%				
20.0	94%	100%				
12.5	88%	97%				
10.0	87%	93%				
5.0	80%	85%				
2.5	73%	77%				
1.25	66%	70%				
0.630	60%	64%				
0.315	54%	59%				
0.160	49%	53%				
0.080	42%	47%				
M.C.(%):	9%	9%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	20	15				
% SAND:	38	38				
% FINES:	42	47				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)				



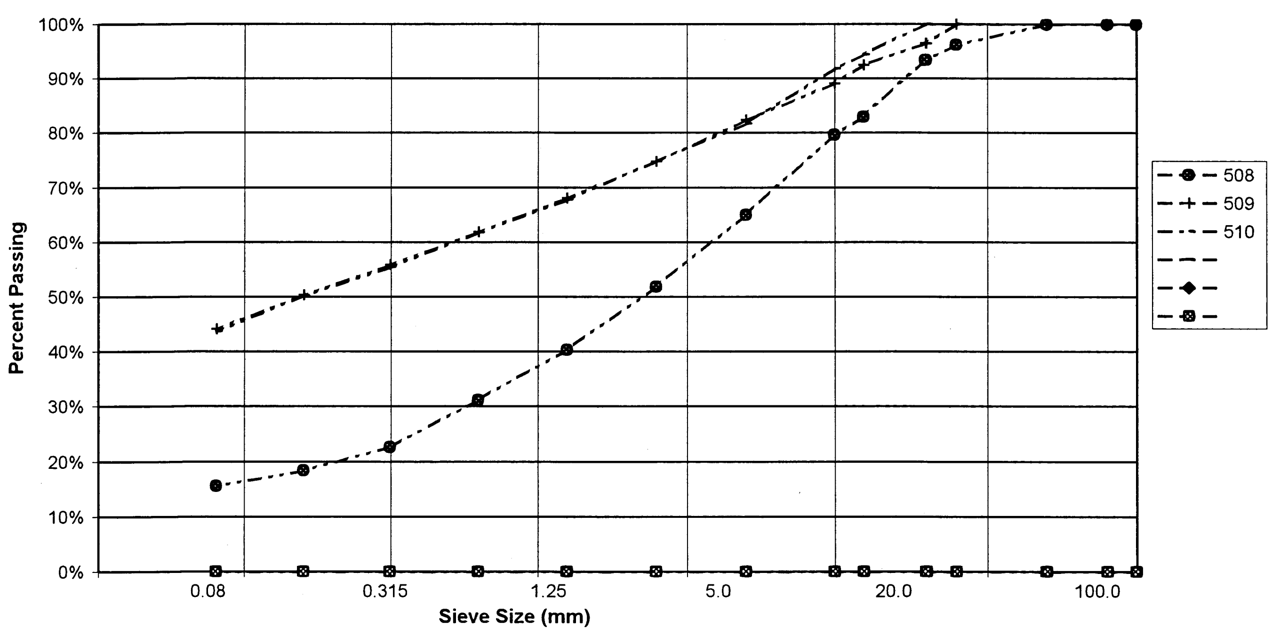
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1741+475 13M LT
LOGGED BY: D.T.

HOLE No.: 611-302

DATE COMP: 2001/07/27

FIELD NO:	508	509	510			
LAB NO:	1254	1255	1256			
DEPTH:	1.2-1.4	2.9-3.1	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	96%	100%	100%			
20.0	93%	96%	100%			
12.5	83%	93%	94%			
10.0	80%	89%	92%			
5.0	65%	82%	82%			
2.5	52%	75%	75%			
1.25	40%	68%	68%			
0.630	31%	62%	62%			
0.315	23%	56%	55%			
0.160	18%	50%	50%			
0.080	16%	44%	44%			
M.C.(%):	4%	9%	8%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	35	18	18			
% SAND:	49	38	38			
% FINES:	16	44	44			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

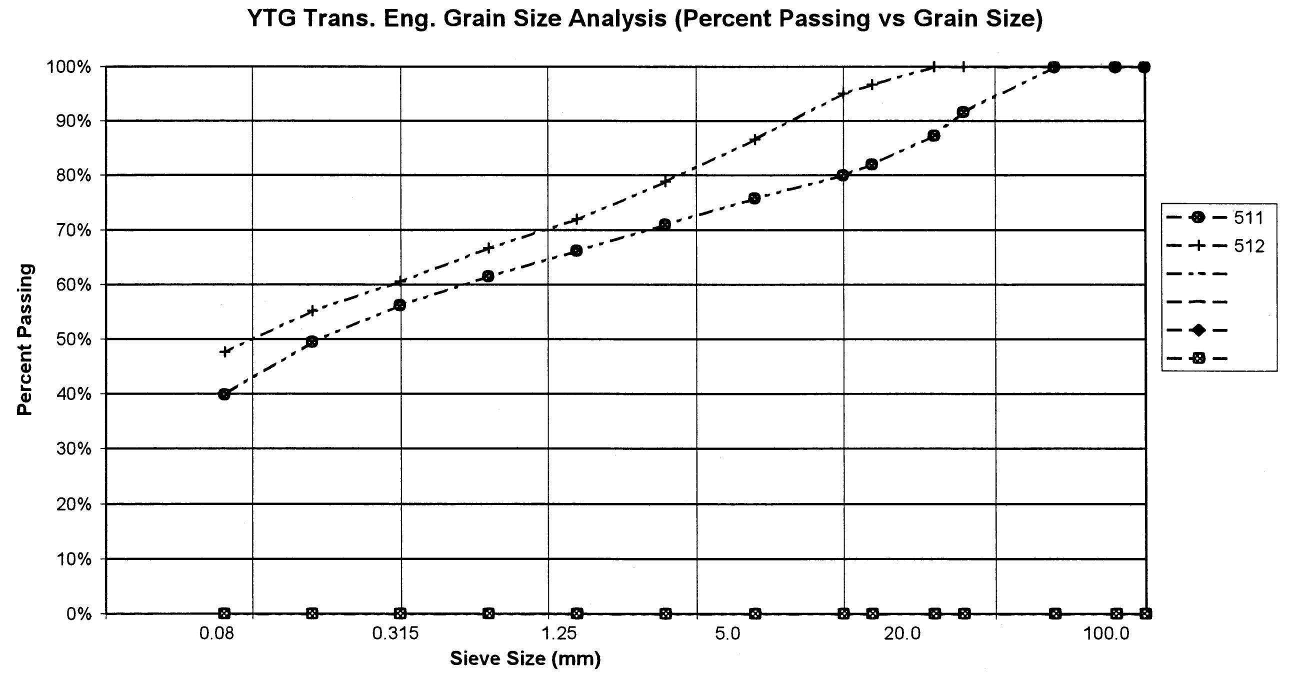


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1741+375 10M LT
LOGGED BY: D.T.

HOLE No.: 611-303

DATE COMP: 2001/07/27

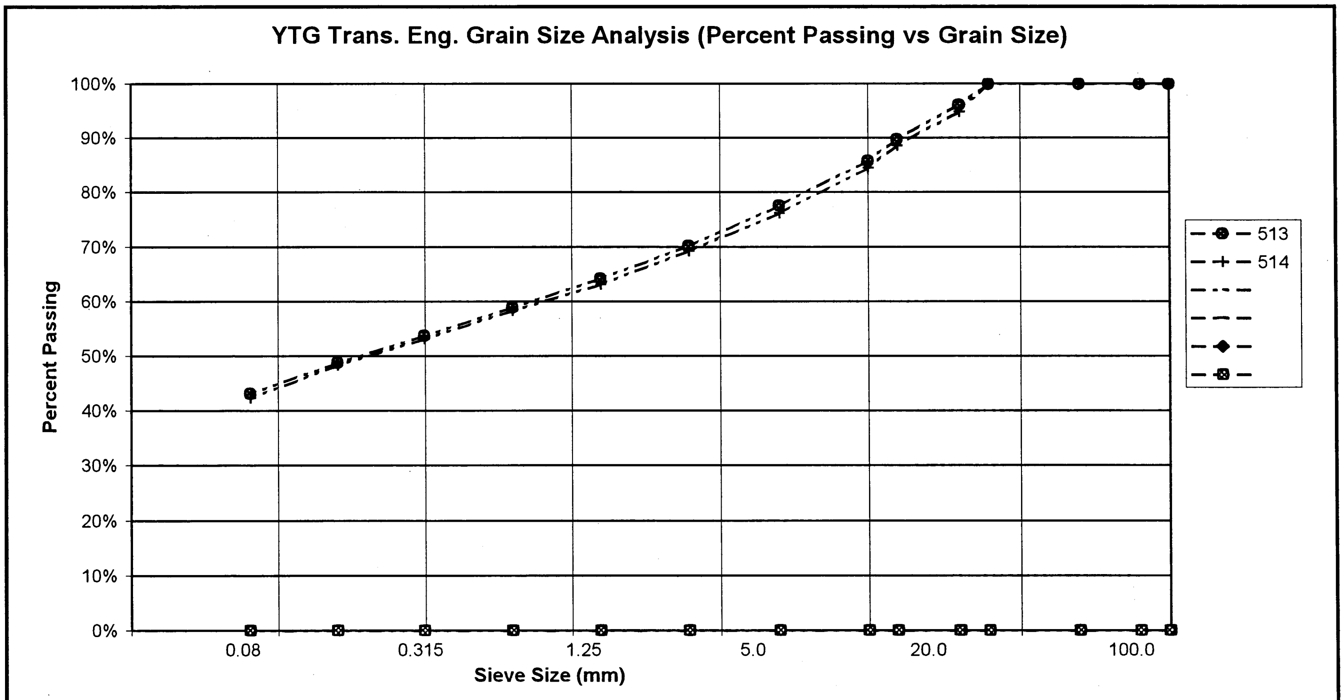
FIELD NO:	511	512				
LAB NO:	1257	1258				
DEPTH:	1.0-1.2	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	92%	100%				
20.0	87%	100%				
12.5	82%	97%				
10.0	80%	95%				
5.0	76%	87%				
2.5	71%	79%				
1.25	66%	72%				
0.630	62%	67%				
0.315	56%	61%				
0.160	50%	55%				
0.080	40%	48%				
M.C.(%):	10%	8%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	24	13				
% SAND:	36	39				
% FINES:	40	48				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)				



YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
HOLE No.: 611-304
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1741+275 10M LT
LOGGED BY: D.T.
DATE COMP: 2001/07/30

FIELD NO:	513	514				
LAB NO:	1259	1260				
DEPTH:	1.3-1.5	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	100%				
20.0	96%	95%				
12.5	90%	89%				
10.0	86%	85%				
5.0	78%	76%				
2.5	70%	69%				
1.25	64%	63%				
0.630	59%	58%				
0.315	54%	53%				
0.160	49%	48%				
0.080	43%	42%				
M.C.(%):	8%	8%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	22	24				
% SAND:	34	34				
% FINES:	43	42				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)				

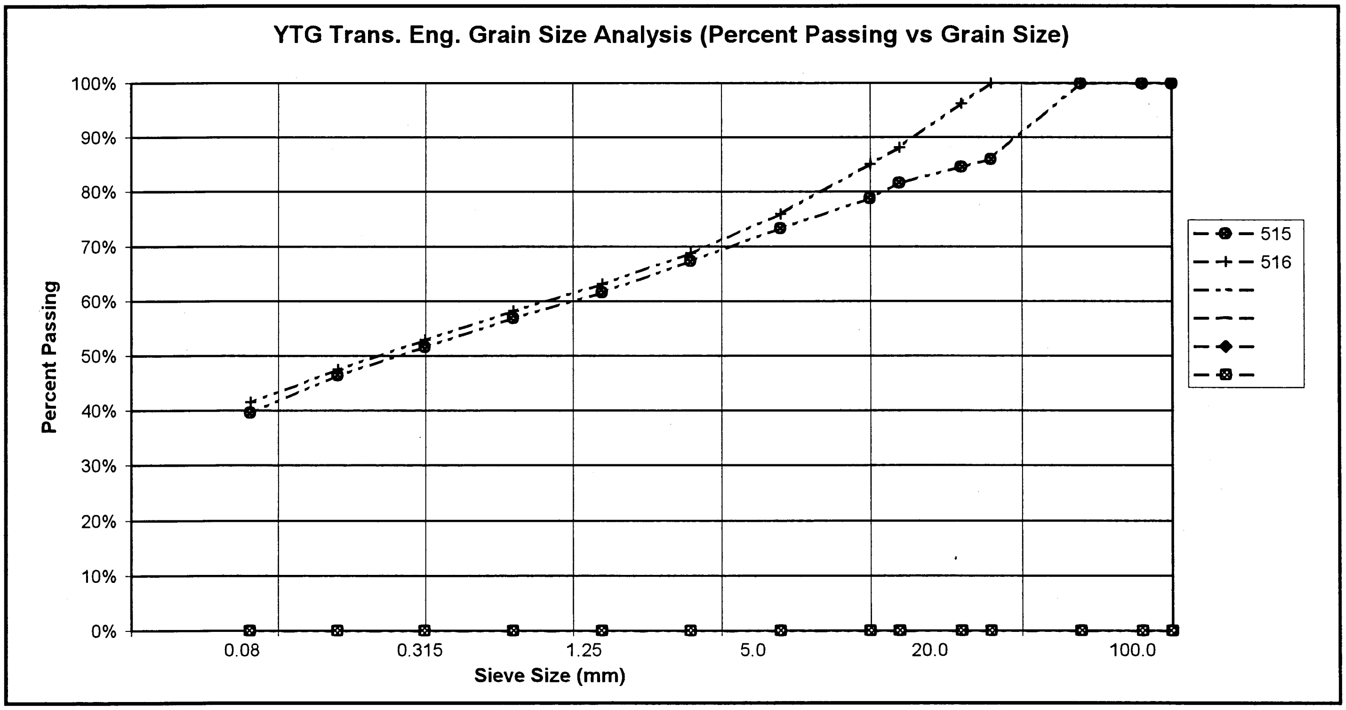


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1471+400 10M RT
LOGGED BY: D.T.

HOLE No.: 611-305

DATE COMP: 2001/07/30

FIELD NO:	515	516				
LAB NO:	1261	1262				
DEPTH:	1.0-1.2	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	86%	100%				
20.0	85%	96%				
12.5	82%	88%				
10.0	79%	85%				
5.0	73%	76%				
2.5	67%	69%				
1.25	62%	63%				
0.630	57%	58%				
0.315	52%	53%				
0.160	46%	48%				
0.080	40%	42%				
M.C.(%):	9%	8%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	27	24				
% SAND:	34	34				
% FINES:	40	42				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)				

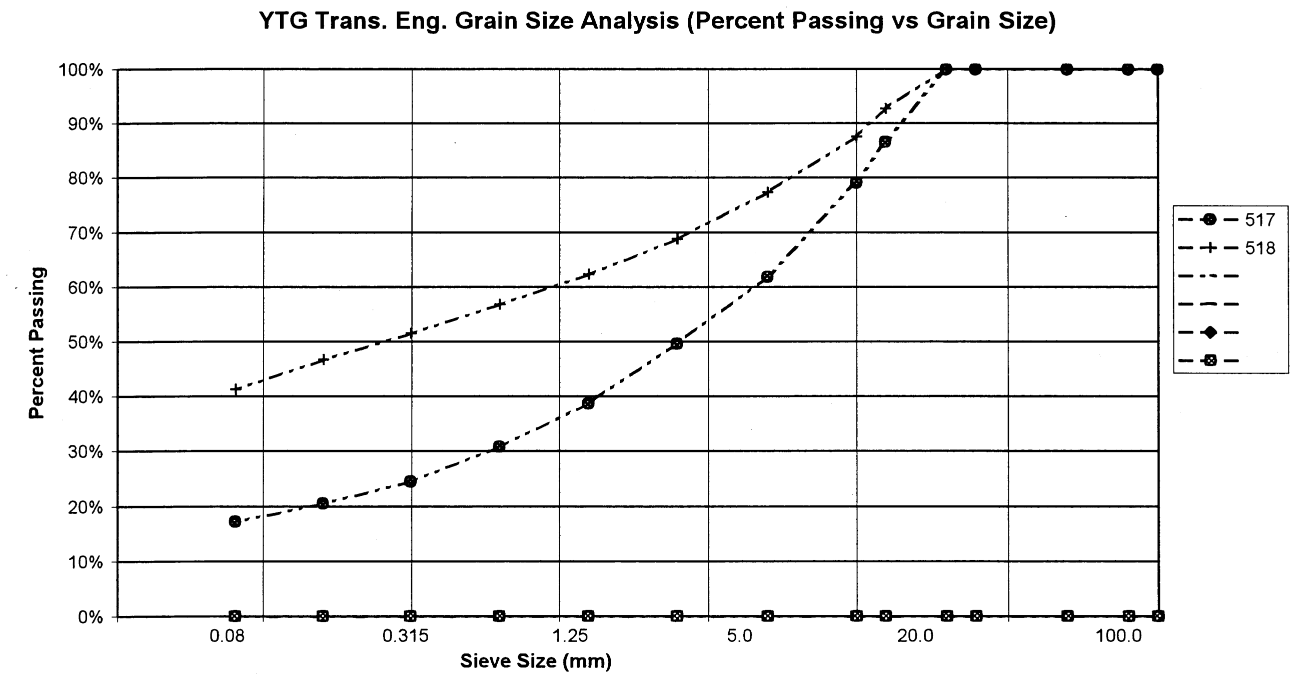

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1741+600 27M RT
LOGGED BY: D.T.

HOLE No.: 611-306

DATE COMP: 2001/07/30

FIELD NO:	517	518				
LAB NO:	1263	1264				
DEPTH:	1.2-1.4	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	100%				
20.0	100%	100%				
12.5	87%	93%				
10.0	79%	88%				
5.0	62%	77%				
2.5	50%	69%				
1.25	39%	62%				
0.630	31%	57%				
0.315	25%	52%				
0.160	21%	47%				
0.080	17%	41%				
M.C.(%):	10%	12%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	38	23				
% SAND:	45	36				
% FINES:	17	41				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)				

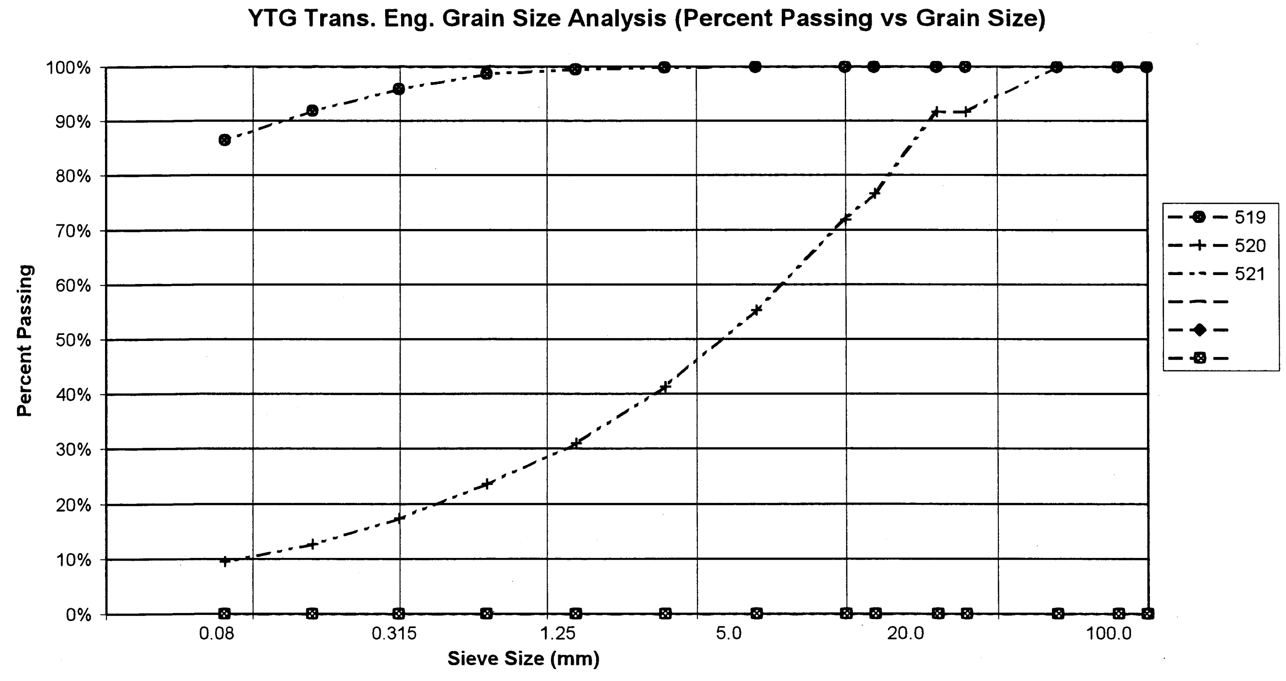


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1741+775 20M RT
LOGGED BY: D.T.

HOLE No.: 611-307

DATE COMP: 2001/07/30

FIELD NO:	519	520	521			
LAB NO:	1265	1266	LOST			
DEPTH:	1.2-1.4	2.8-3.0	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	92%	100%			
20.0	100%	92%	100%			
12.5	100%	77%	100%			
10.0	100%	72%	100%			
5.0	100%	55%	100%			
2.5	100%	41%	100%			
1.25	100%	31%	100%			
0.630	99%	24%	100%			
0.315	96%	17%	100%			
0.160	92%	13%	100%			
0.080	87%	10%	100%			
M.C.(%):	39%	4%	5%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	0	45	0			
% SAND:	13	46	0			
% FINES:	87	10	100			
CLASSIFICATION	SILT (ML)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	[redacted]			



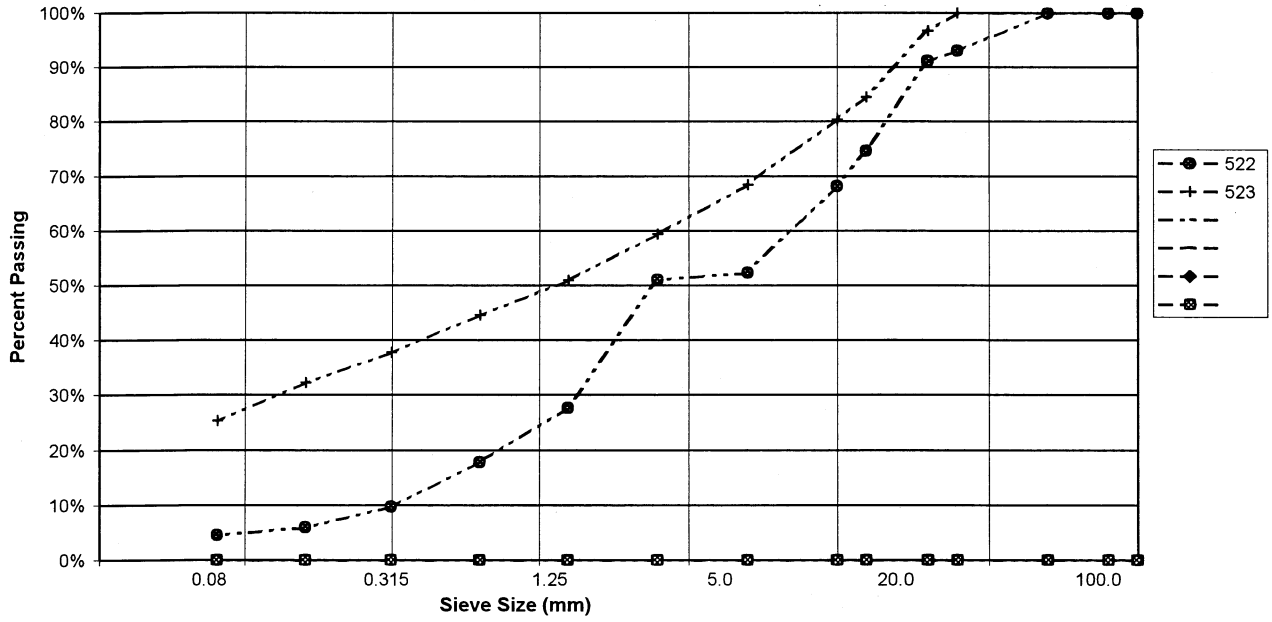
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1741+920 20M RT
LOGGED BY: D.T.

HOLE No.: 611-308

DATE COMP: 2001/07/30

FIELD NO:	522	523				
LAB NO:	1268	1269				
DEPTH:	1.2-1.4	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	93%	100%				
20.0	91%	97%				
12.5	75%	84%				
10.0	68%	80%				
5.0	52%	68%				
2.5	51%	59%				
1.25	28%	51%				
0.630	18%	45%				
0.315	10%	38%				
0.160	6%	32%				
0.080	5%	25%				
M.C.(%):	3%	10%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	48	32				
% SAND:	48	43				
% FINES:	5	25				
CLASSIFICATION	WELL-GRADED SAND WITH GRAVEL (SW)	SILTY SAND WITH GRAVEL (SM)				

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

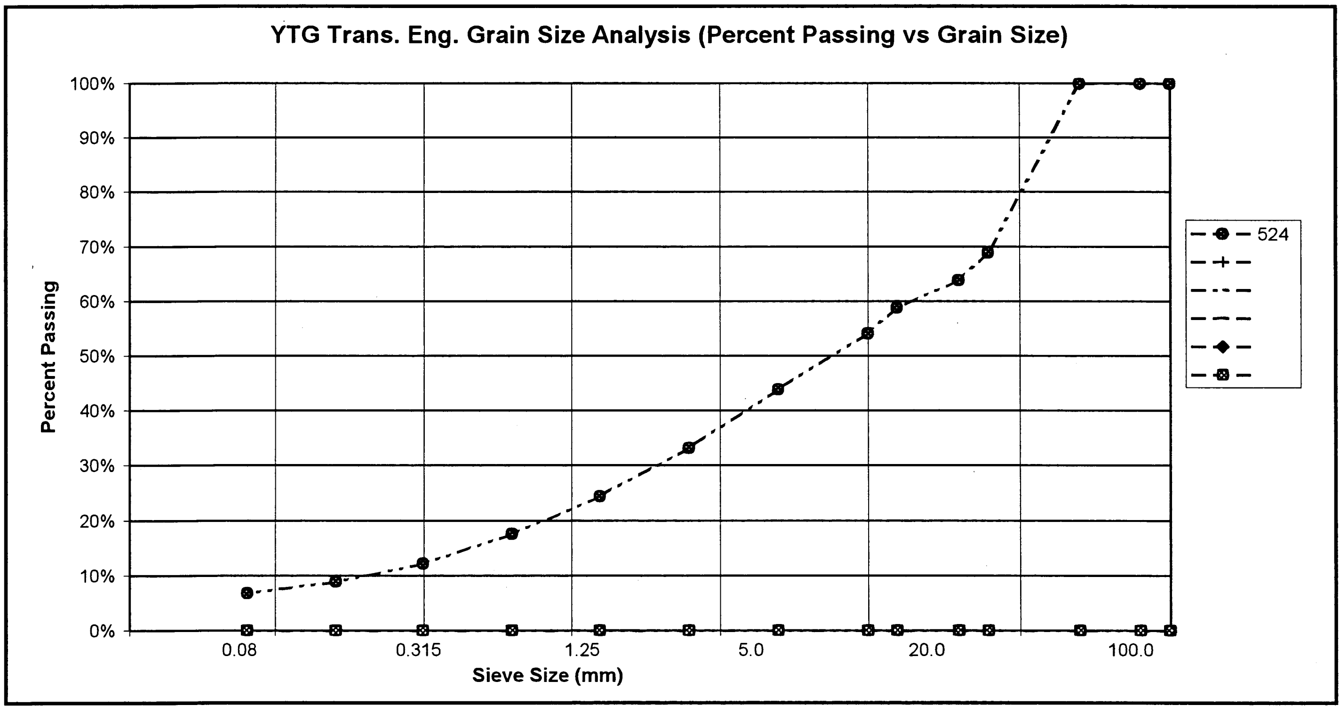


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1741+975 25M RT
LOGGED BY: D.T.

HOLE No.: 611-309

DATE COMP: 2001/07/30

FIELD NO:	524					
LAB NO:	1270					
DEPTH:	1.3-1.5					
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**					
100.0	100%					
80.0	100%					
50.0	100%					
25.0	69%					
20.0	64%					
12.5	59%					
10.0	54%					
5.0	44%					
2.5	33%					
1.25	24%					
0.630	18%					
0.315	12%					
0.160	9%					
0.080	7%					
M.C.(%):	2%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	56					
% SAND:	37					
% FINES:	7					
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)					



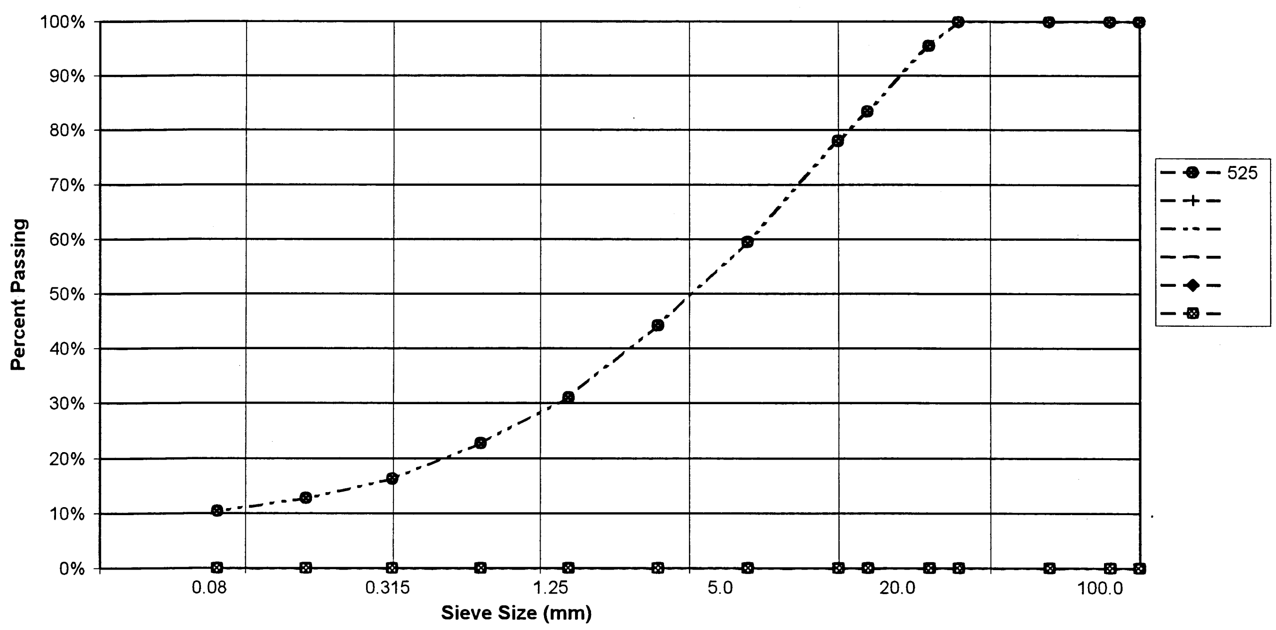
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1741+997 20M RT
LOGGED BY: D.T.

HOLE No.: 611-310

DATE COMP: 2001/07/30

FIELD NO:	525					
LAB NO:	1271					
DEPTH:	1.8-2.0					
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**					
100.0	100%					
80.0	100%					
50.0	100%					
25.0	100%					
20.0	96%					
12.5	83%					
10.0	78%					
5.0	60%					
2.5	44%					
1.25	31%					
0.630	23%					
0.315	16%					
0.160	13%					
0.080	10%					
M.C.(%):	4%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	40					
% SAND:	49					
% FINES:	10					
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)					

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

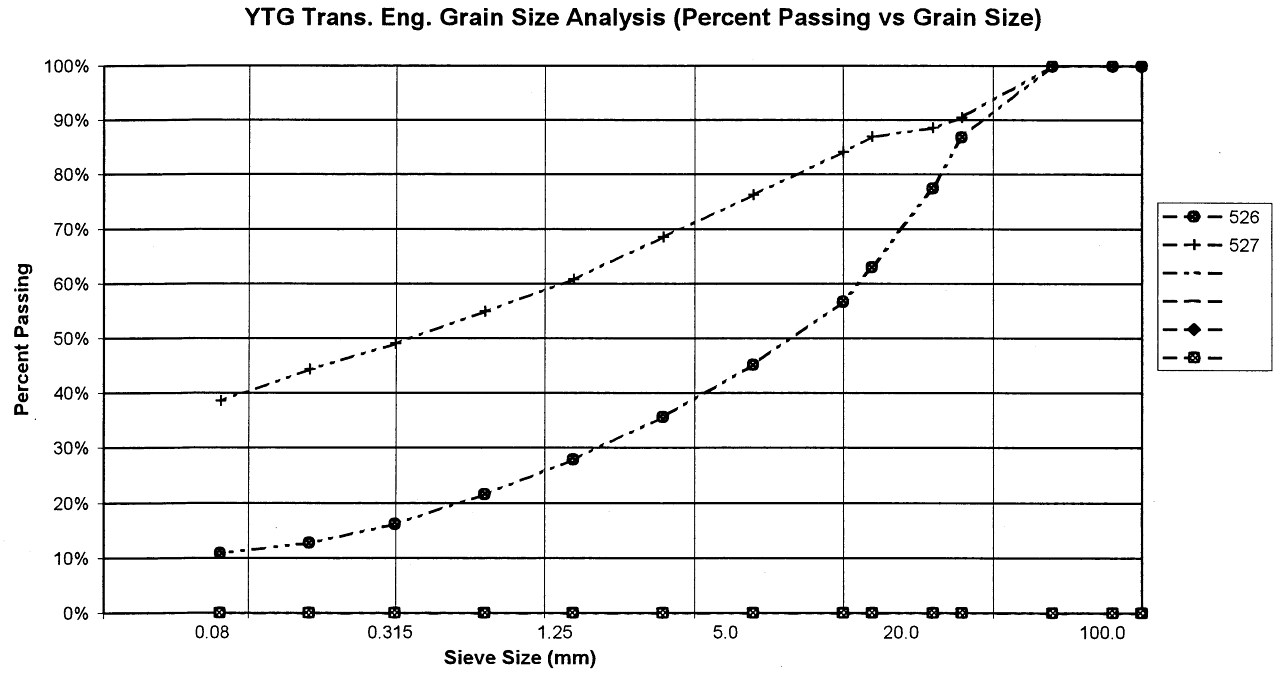


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1742+026 18M RT
LOGGED BY: D.T.

HOLE No.: 611-311

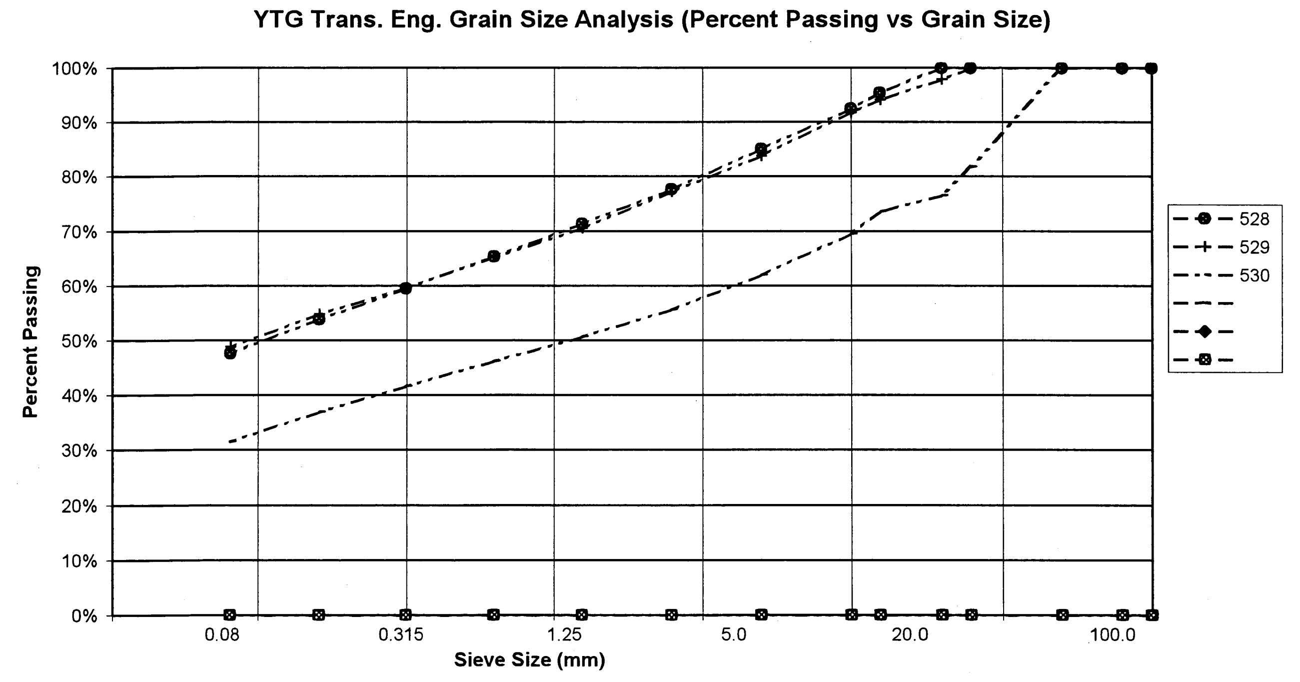
DATE COMP: 2001/07/30

FIELD NO:	526	527				
LAB NO:	1272	1273				
DEPTH:	2.6-3.0	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	87%	90%				
20.0	77%	89%				
12.5	63%	87%				
10.0	57%	84%				
5.0	45%	76%				
2.5	36%	69%				
1.25	28%	61%				
0.630	22%	55%				
0.315	16%	49%				
0.160	13%	44%				
0.080	11%	39%				
M.C.(%):	5%	15%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	55	24				
% SAND:	34	38				
% FINES:	11	39				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)				



PROJECT NUMBER: 092-202101-0361-1
HOLE No.: 611-312
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1742+200 20M RT
LOGGED BY: D.T.
DATE COMP: 2001/07/30

FIELD NO:	528	529	530			
LAB NO:	1274	1275	1276			
DEPTH:	1.4-1.6	2.9-3.1	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	82%			
20.0	100%	98%	77%			
12.5	95%	94%	74%			
10.0	92%	92%	70%			
5.0	85%	84%	62%			
2.5	78%	77%	56%			
1.25	71%	71%	51%			
0.630	65%	65%	46%			
0.315	59%	60%	42%			
0.160	54%	55%	37%			
0.080	48%	49%	32%			
M.C.(%):	16%	16%	9%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	15	16	38			
% SAND:	37	35	30			
% FINES:	48	49	32			
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)			



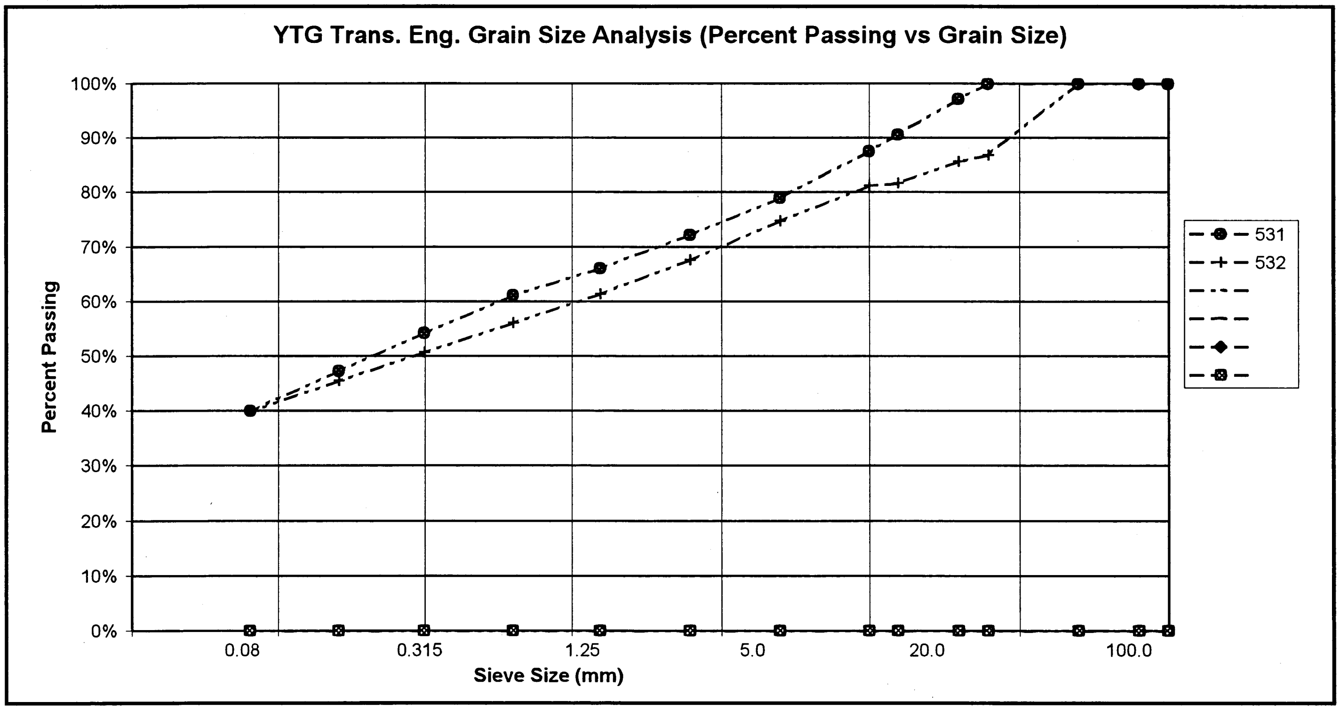
PROJECT NUMBER: 092-202101-0361-1

HOLE No.: 611-313

CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1742+400 15M RT
LOGGED BY: D.T.

DATE COMP: 2001/07/31

FIELD NO:	531	532				
LAB NO:	1277	1278				
DEPTH:	1.3-1.5	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	87%				
20.0	97%	86%				
12.5	91%	82%				
10.0	88%	81%				
5.0	79%	75%				
2.5	72%	68%				
1.25	66%	61%				
0.630	61%	56%				
0.315	54%	51%				
0.160	47%	46%				
0.080	40%	40%				
M.C.(%):	13%	11%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	21	25				
% SAND:	39	35				
% FINES:	40	40				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)				

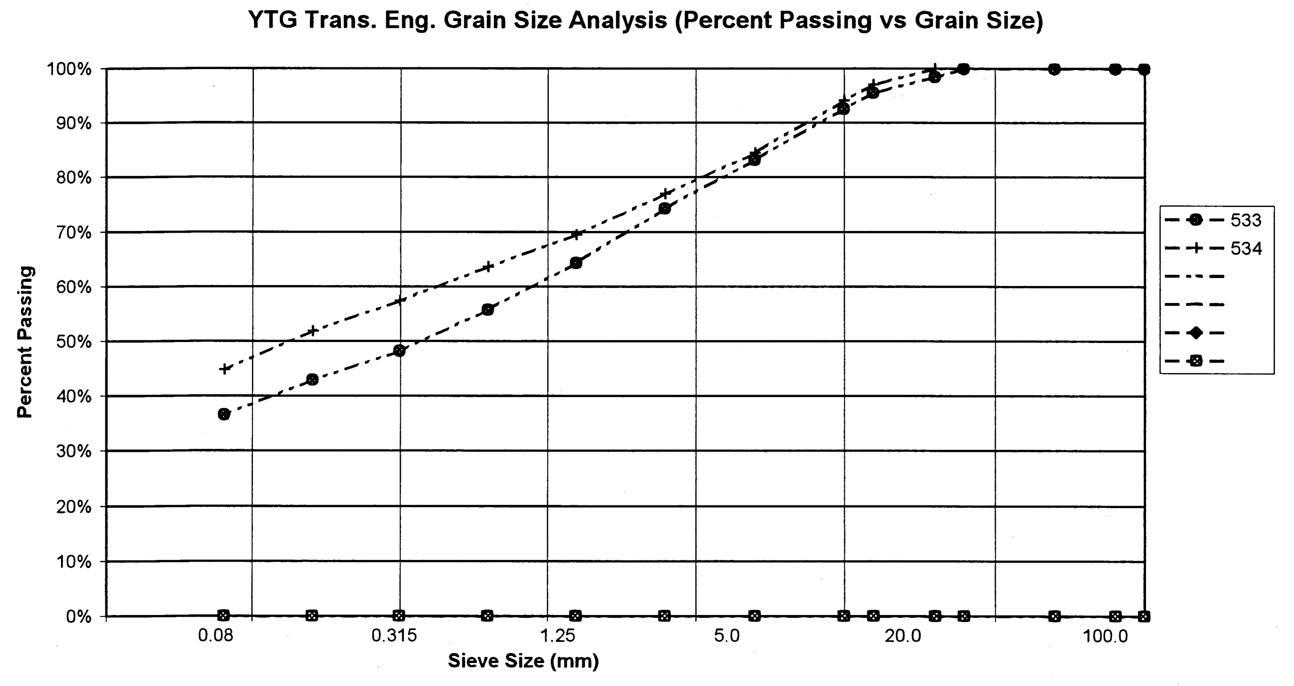


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1742+832 25M RT
LOGGED BY: D.T.

HOLE No.: 611-314

DATE COMP: 2001/07/31

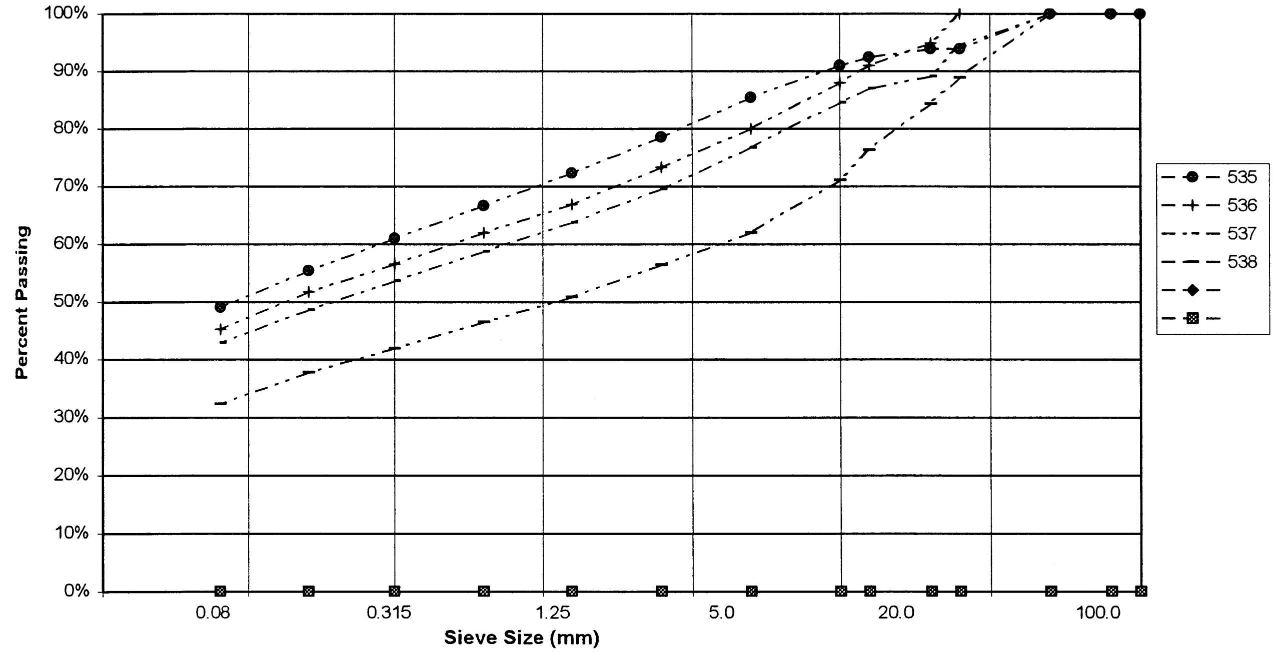
FIELD NO:	533	534				
LAB NO:	1279	1280				
DEPTH:	1.2-1.4	2.9-3.1				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	100%				
20.0	99%	100%				
12.5	96%	97%				
10.0	93%	94%				
5.0	83%	85%				
2.5	74%	77%				
1.25	64%	70%				
0.630	56%	64%				
0.315	48%	57%				
0.160	43%	52%				
0.080	37%	45%				
M.C.(%):	8%	11%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	17	15				
% SAND:	47	40				
% FINES:	37	45				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)				


YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1 HOLE No.: 611-315
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1741+150 20M LT
LOGGED BY: D.T. DATE COMP: 2001/07/31

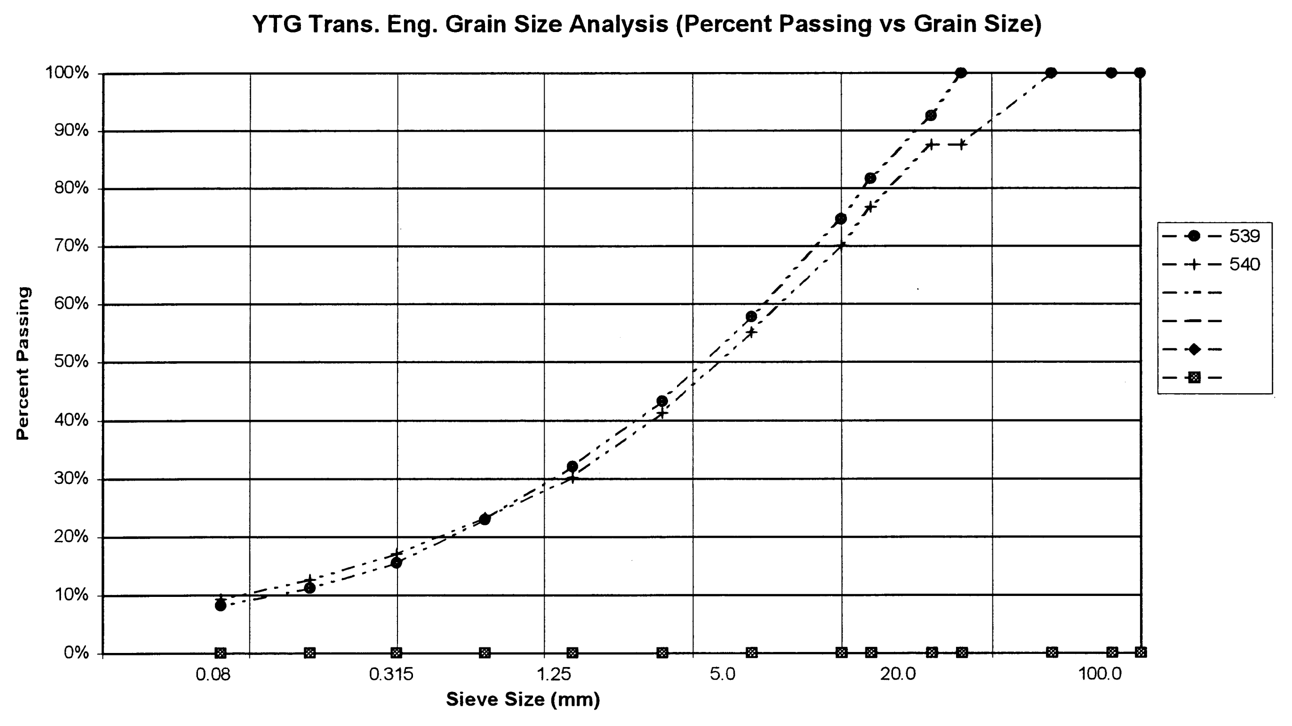
FIELD NO:	535	536	537	538		
LAB NO:	1281	1282	1283	1284		
DEPTH:	1.3-1.5	4.2-4.4	5.7-5.9	7.3-7.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	94%	100%	95%	89%		
20.0	94%	95%	89%	84%		
12.5	92%	91%	87%	76%		
10.0	91%	88%	85%	71%		
5.0	85%	80%	77%	62%		
2.5	79%	73%	69%	56%		
1.25	72%	67%	64%	51%		
0.630	67%	62%	59%	46%		
0.315	61%	57%	54%	42%		
0.160	55%	52%	49%	38%		
0.080	49%	45%	43%	32%		
M.C.(%):	9%	8%	7%	5%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	15	20	23	38		
% SAND:	36	35	34	30		
% FINES:	49	45	43	32		
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0361-1
HOLE No.: 611-316
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1741+070 20m LT
LOGGED BY: D.T.
DATE COMP: 2001/07/31

FIELD NO:	539	540				
LAB NO:	1285	1286				
DEPTH:	1.3-1.5	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	88%				
20.0	93%	88%				
12.5	82%	77%				
10.0	75%	70%				
5.0	58%	55%				
2.5	43%	41%				
1.25	32%	30%				
0.630	23%	23%				
0.315	16%	17%				
0.160	11%	13%				
0.080	8%	9%				
M.C.(%):	3%	3%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	42	45				
% SAND:	50	46				
% FINES:	8	9				
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)				

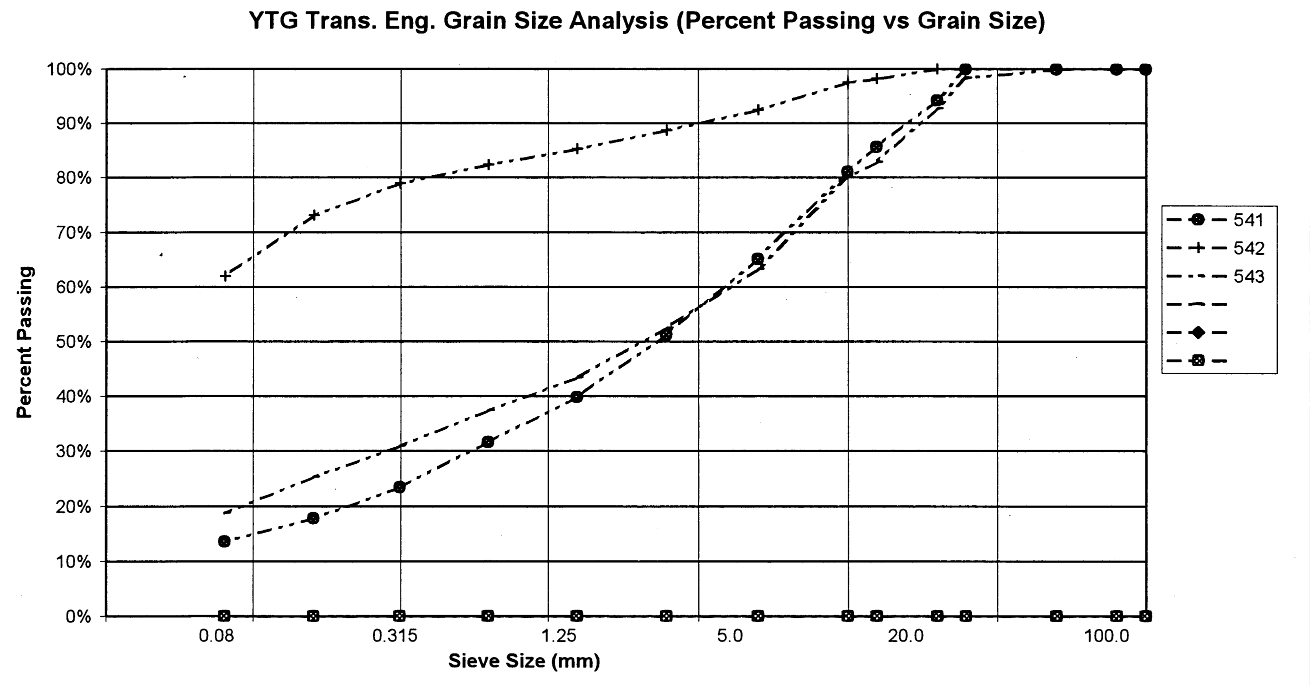


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1740+975 17M LT
LOGGED BY: D.T.

HOLE No.: 611-317

DATE COMP: 2001/07/31

FIELD NO:	541	542	543			
LAB NO:	1287	1288	1289			
DEPTH:	1.2-1.4	2.6-2.8	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	98%			
20.0	94%	100%	93%			
12.5	86%	98%	83%			
10.0	81%	98%	80%			
5.0	65%	93%	63%			
2.5	51%	89%	52%			
1.25	40%	85%	43%			
0.630	32%	82%	37%			
0.315	23%	79%	31%			
0.160	18%	73%	25%			
0.080	14%	62%	19%			
M.C.(%):	6%	20%	8%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	35	7	37			
% SAND:	52	31	45			
% FINES:	14	62	19			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)			



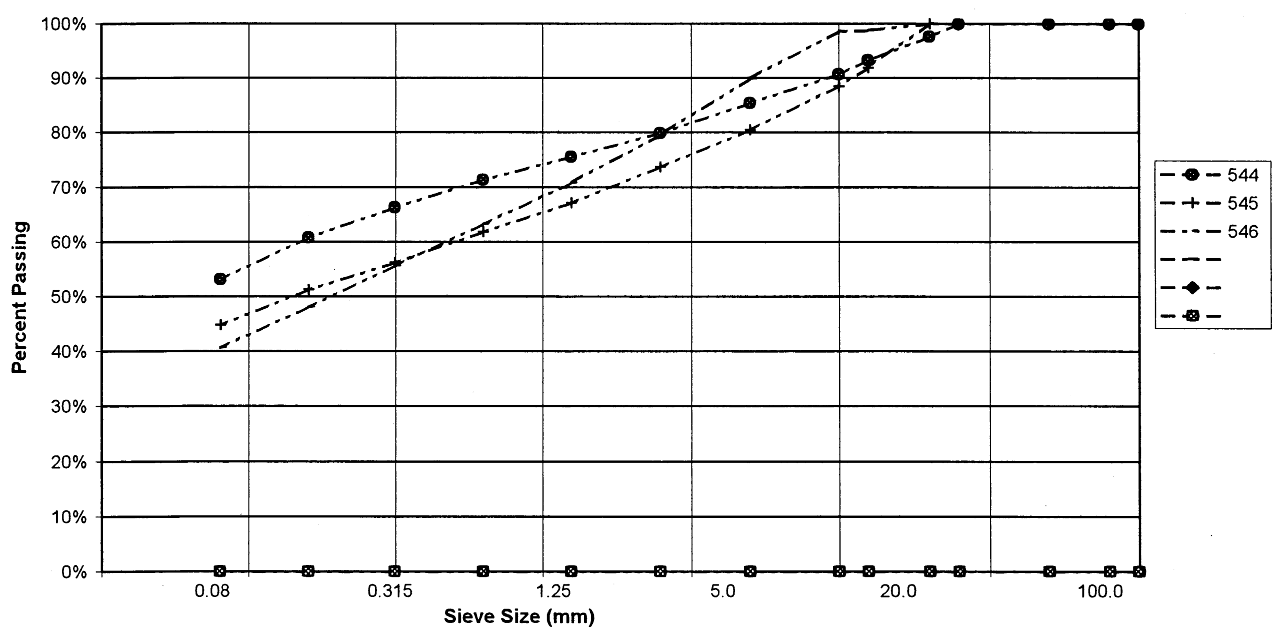
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1740+850 17M LT
LOGGED BY: D.T.

HOLE No.: 611-318

DATE COMP: 2001/07/31

FIELD NO:	544	545	546			
LAB NO:	1290	1291	1292			
DEPTH:	1.1-1.3	2.9-3.1	5.6-6.0			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	98%	100%	100%			
12.5	93%	92%	99%			
10.0	91%	89%	99%			
5.0	86%	81%	90%			
2.5	80%	74%	80%			
1.25	76%	67%	71%			
0.630	71%	62%	63%			
0.315	66%	56%	56%			
0.160	61%	51%	48%			
0.080	53%	45%	41%			
M.C.(%):	7%	10%	6%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	15	19	10			
% SAND:	32	36	49			
% FINES:	53	45	41			
CLASSIFICATION	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)			

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

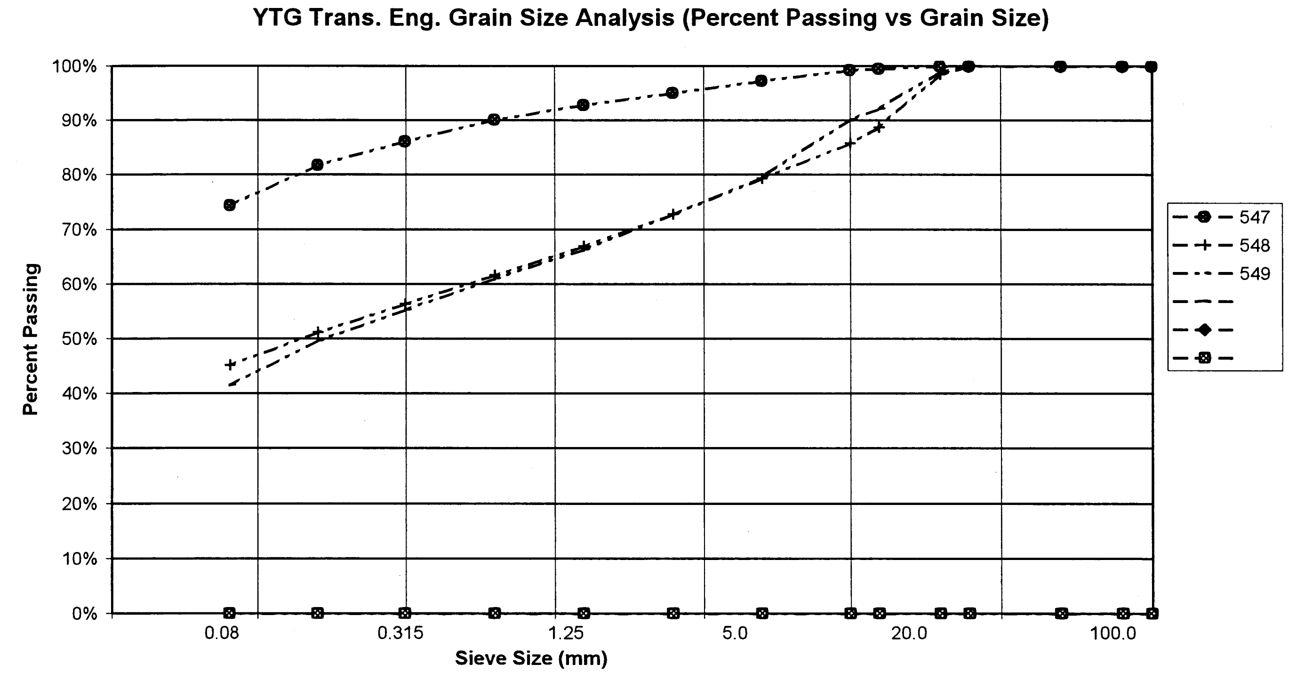


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1740+750 13M LT
LOGGED BY: D.T.

HOLE No.: 611-319

DATE COMP: 2001/07/31

FIELD NO:	547	548	549			
LAB NO:	1293	1294	1295			
DEPTH:	0.8-1.0	2.8-3.0	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	100%	98%	99%			
12.5	100%	89%	92%			
10.0	99%	86%	90%			
5.0	97%	79%	80%			
2.5	95%	73%	73%			
1.25	93%	67%	66%			
0.630	90%	62%	61%			
0.315	86%	56%	55%			
0.160	82%	51%	50%			
0.080	74%	45%	42%			
M.C.(%):	17%	8%	6%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	3	21	20			
% SAND:	23	34	38			
% FINES:	74	45	42			
CLASSIFICATION	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



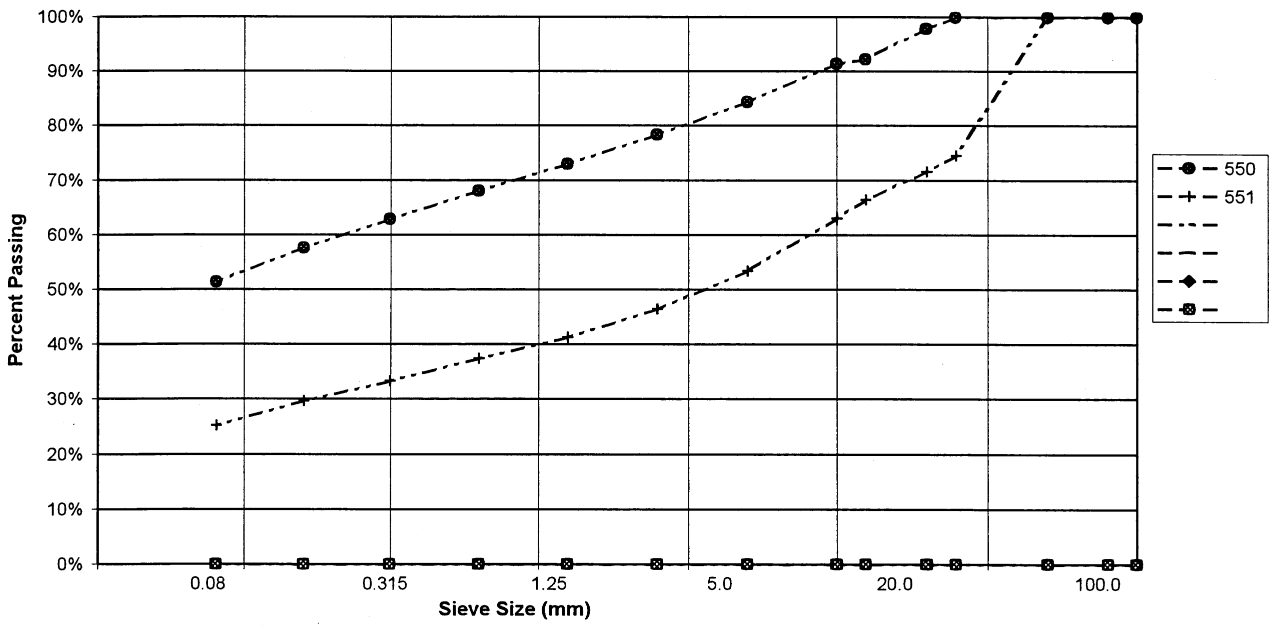
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1740+550 17M LT
LOGGED BY: D.T.

HOLE No.: 611-320

DATE COMP: 2001/08/01

FIELD NO:	550	551				
LAB NO:	1296	1297				
DEPTH:	1.4-1.6	3.4-3.6				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	75%				
20.0	98%	72%				
12.5	92%	66%				
10.0	91%	63%				
5.0	84%	53%				
2.5	78%	47%				
1.25	73%	41%				
0.630	68%	37%				
0.315	63%	33%				
0.160	58%	30%				
0.080	51%	25%				
M.C.(%):	12%	5%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	16	47				
% SAND:	33	28				
% FINES:	51	25				
CLASSIFICATION	SANDY SILT WITH GRAVEL (ML)	SILTY GRAVEL WITH SAND (GM)				

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

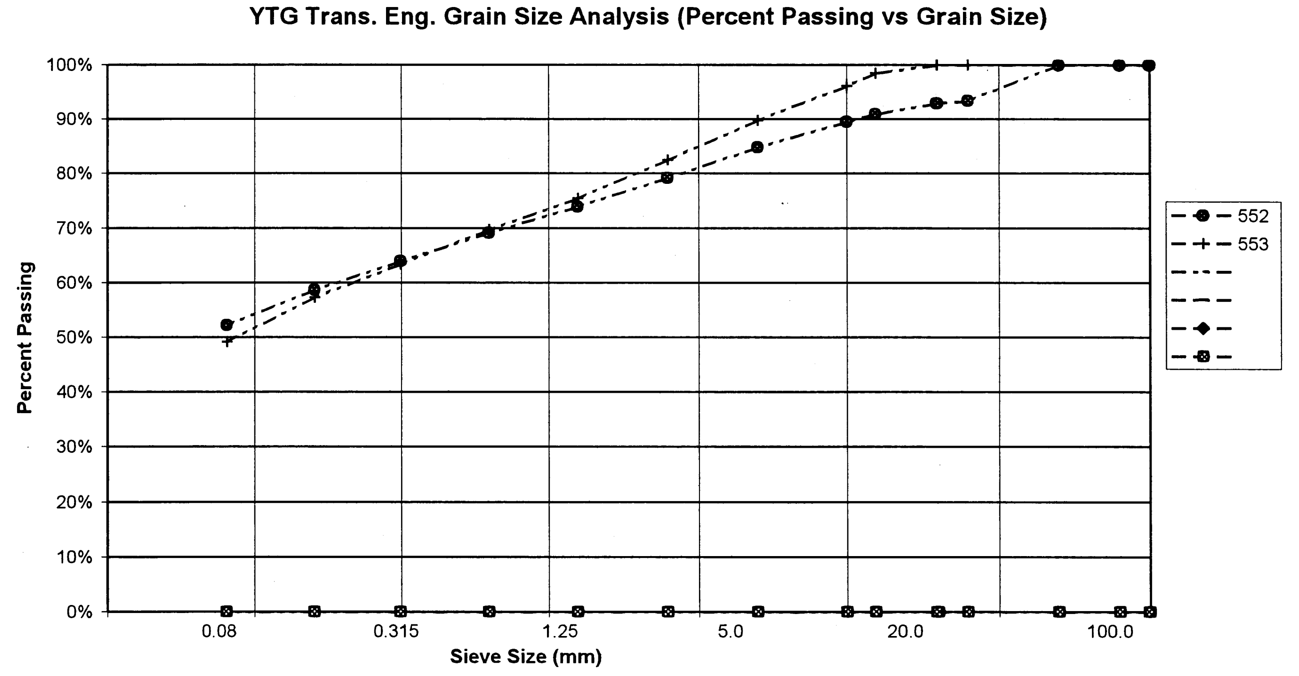


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1740+425 25M LT
LOGGED BY: D.T.

HOLE No.: 611-321

DATE COMP: 2001/08/01

FIELD NO:	552	553				
LAB NO:	1298	1299				
DEPTH:	1.4-1.6	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	93%	100%				
20.0	93%	100%				
12.5	91%	98%				
10.0	90%	96%				
5.0	85%	90%				
2.5	79%	83%				
1.25	74%	75%				
0.630	69%	70%				
0.315	64%	63%				
0.160	59%	57%				
0.080	52%	49%				
M.C.(%):	15%	10%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	15	10				
% SAND:	33	41				
% FINES:	52	49				
CLASSIFICATION	SANDY SILT WITH GRAVEL (ML)	SILTY SAND (SM)				



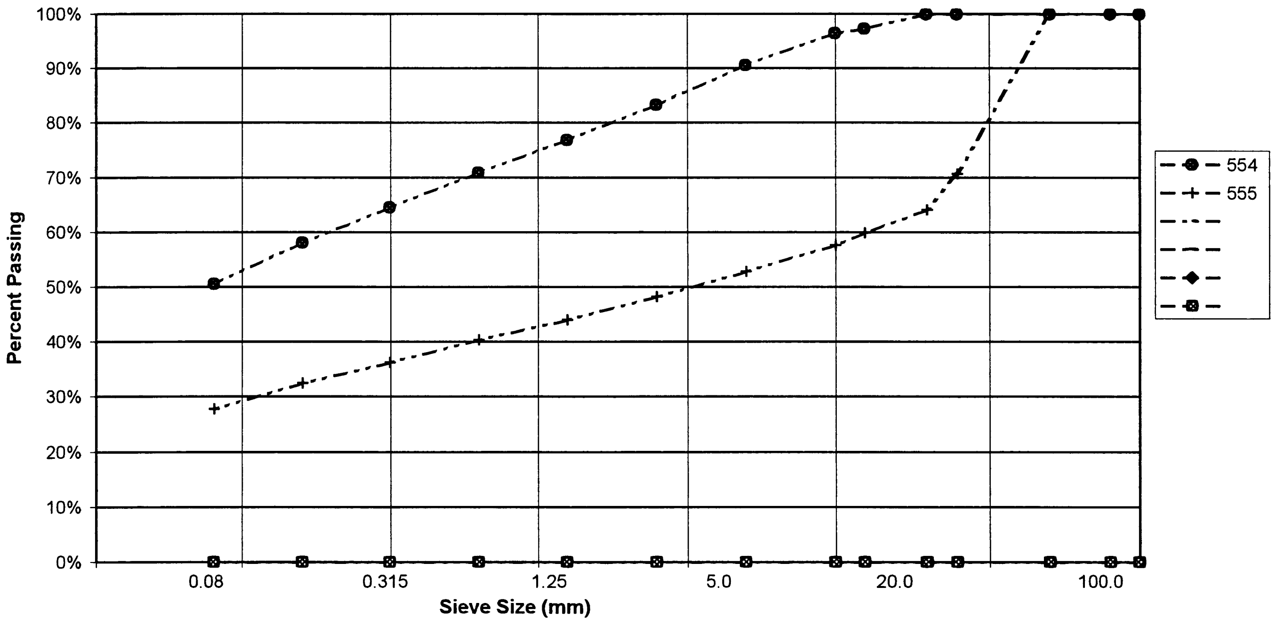
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1740+264 9M LT
LOGGED BY: D.T.

HOLE No.: 611-322

DATE COMP: 2001/08/01

FIELD NO:	554	555				
LAB NO:	1300	1301				
DEPTH:	1.3-1.5	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	71%				
20.0	100%	64%				
12.5	97%	60%				
10.0	96%	58%				
5.0	91%	53%				
2.5	83%	48%				
1.25	77%	44%				
0.630	71%	40%				
0.315	65%	36%				
0.160	58%	33%				
0.080	51%	28%				
M.C.(%):	11%	5%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	9	47				
% SAND:	40	25				
% FINES:	51	28				
CLASSIFICATION	SANDY SILT (ML)	SILTY GRAVEL WITH SAND (GM)				

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

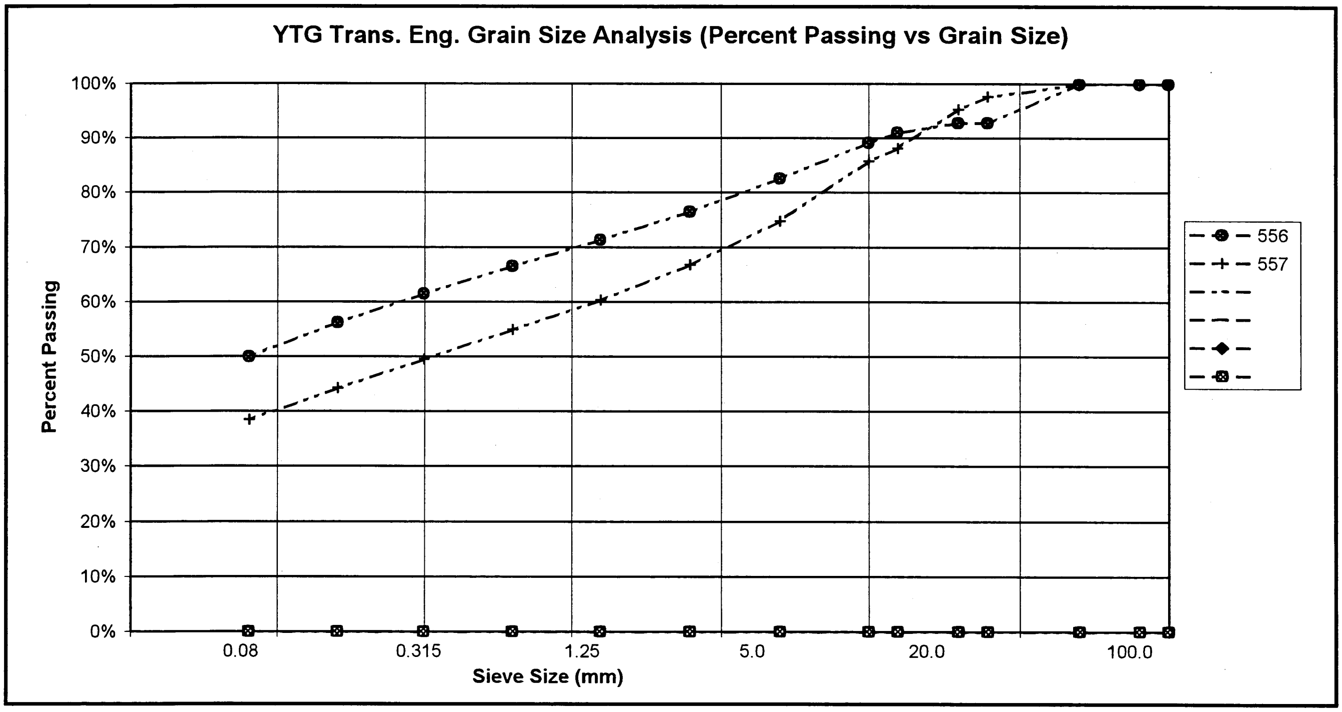


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1740+264 19M LT
LOGGED BY: D.T.

HOLE No.: 611-323

DATE COMP: 2001/08/01

FIELD NO:	556	557				
LAB NO:	1302	1303				
DEPTH:	1.0-1.2	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	93%	98%				
20.0	93%	95%				
12.5	91%	88%				
10.0	89%	86%				
5.0	83%	75%				
2.5	77%	67%				
1.25	71%	60%				
0.630	67%	55%				
0.315	61%	50%				
0.160	56%	44%				
0.080	50%	39%				
M.C.(%):	10%	8%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	17	25				
% SAND:	33	36				
% FINES:	50	39				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)				



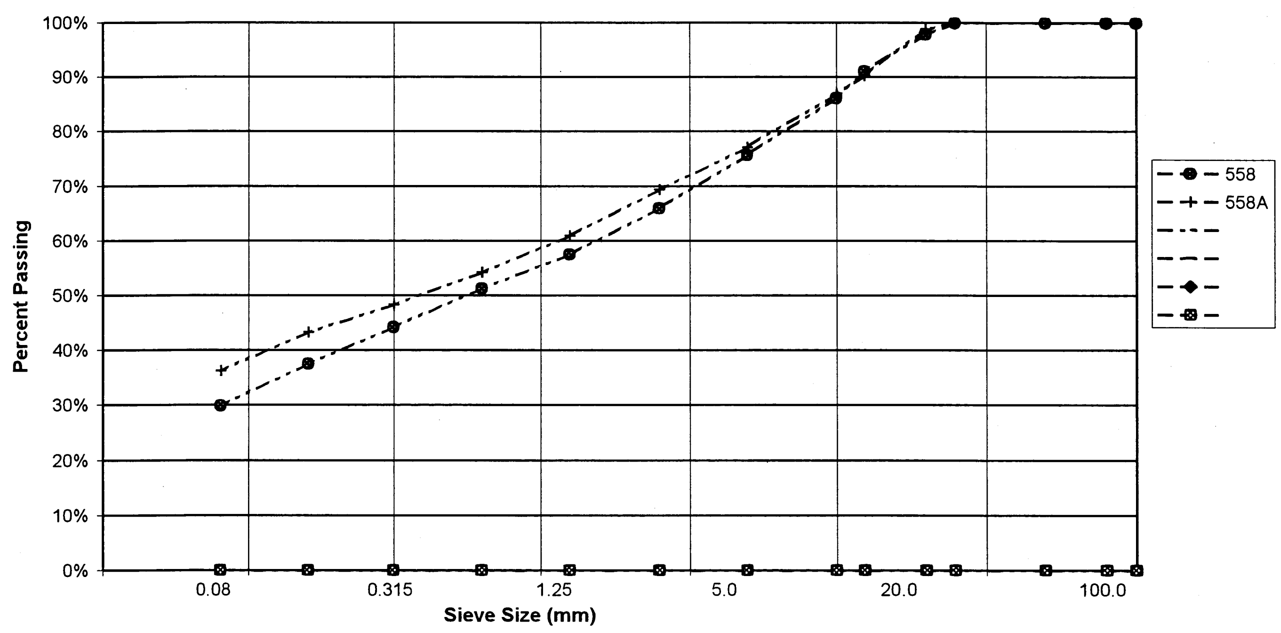
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1740+125 17M LT
LOGGED BY: D.T.

HOLE No.: 611-324

DATE COMP: 2001/08/01

FIELD NO:	558	558A				
LAB NO:	1304	1305				
DEPTH:	0.9-1.1	3.8-4.0				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	100%				
20.0	98%	99%				
12.5	91%	90%				
10.0	86%	87%				
5.0	76%	77%				
2.5	66%	69%				
1.25	58%	61%				
0.630	51%	54%				
0.315	44%	48%				
0.160	38%	43%				
0.080	30%	36%				
M.C.(%):	8%	13%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	24	23				
% SAND:	46	41				
% FINES:	30	36				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)				

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

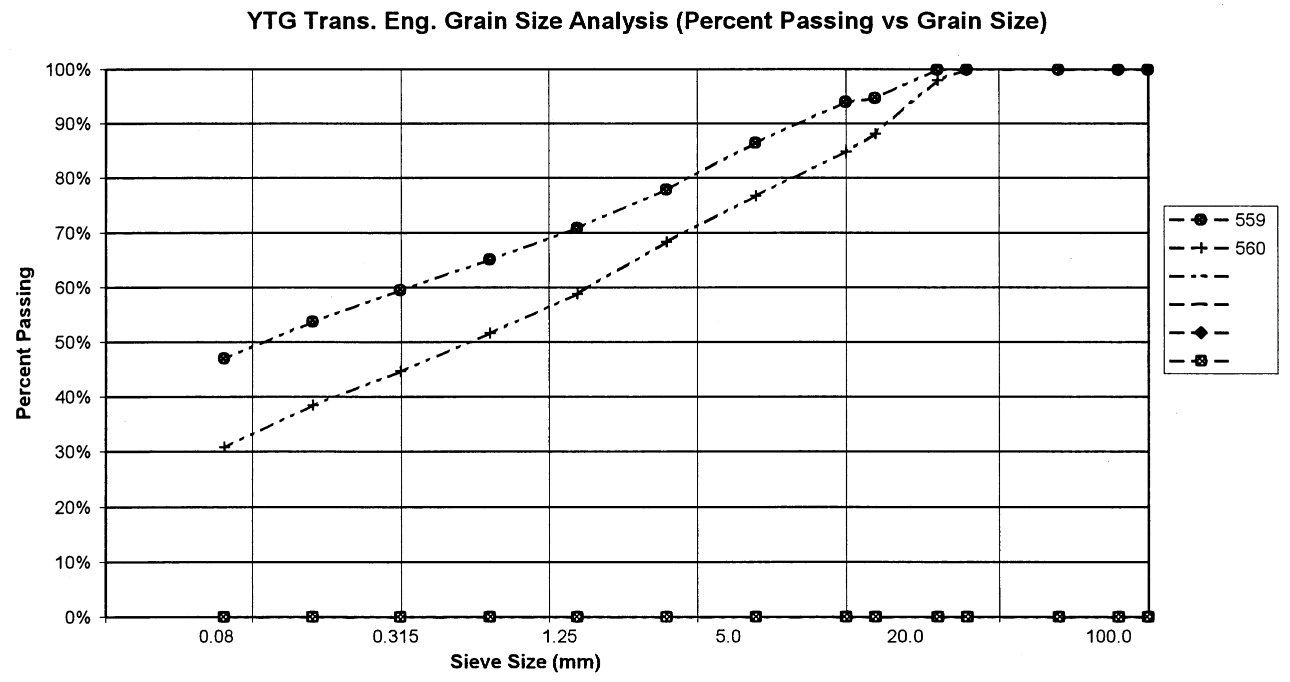


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1740+000 20M LT
LOGGED BY: D.T.

HOLE No.: 611-325

DATE COMP: 2001/08/01

FIELD NO:	559	560				
LAB NO:	1306	1307				
DEPTH:	1.9-2.1	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	100%				
20.0	100%	98%				
12.5	95%	88%				
10.0	94%	85%				
5.0	87%	77%				
2.5	78%	68%				
1.25	71%	59%				
0.630	65%	52%				
0.315	59%	45%				
0.160	54%	38%				
0.080	47%	31%				
M.C.(%):	20%	8%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	13	23				
% SAND:	40	46				
% FINES:	47	31				
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)				

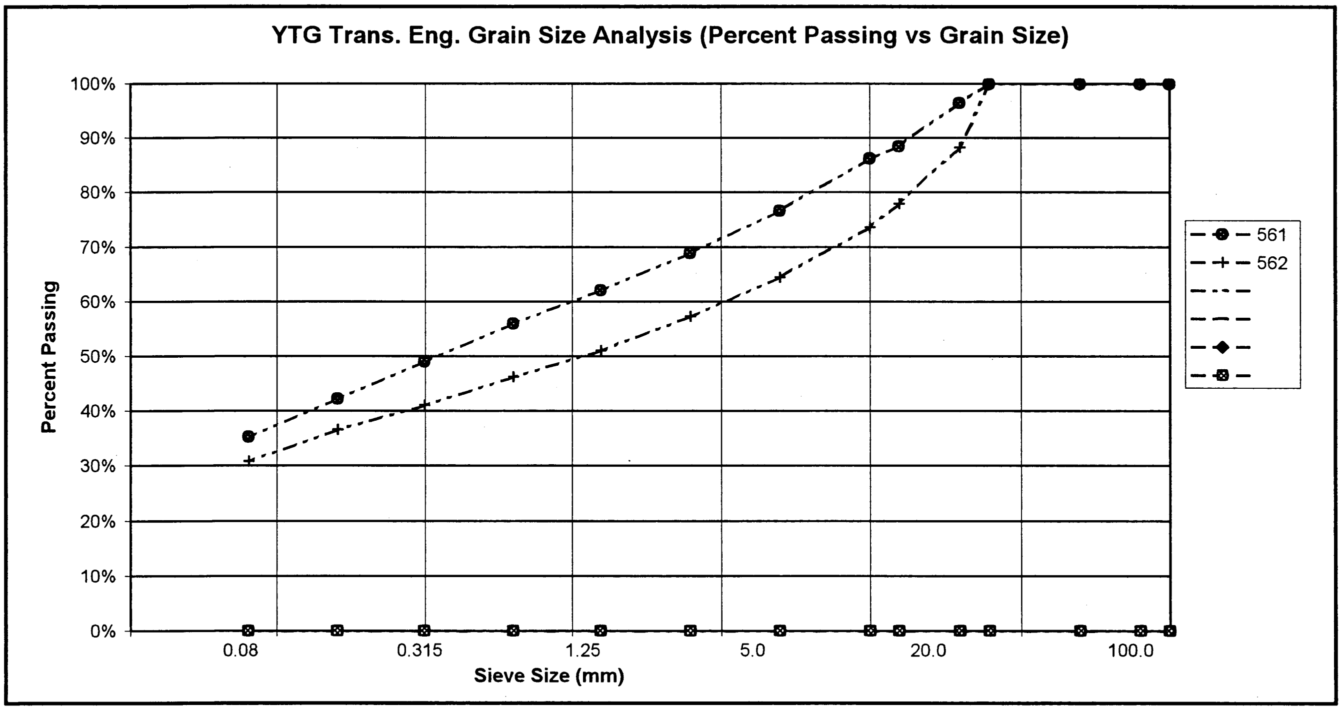


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1740+000 9M LT
LOGGED BY: D.T.

HOLE No.: 611-326

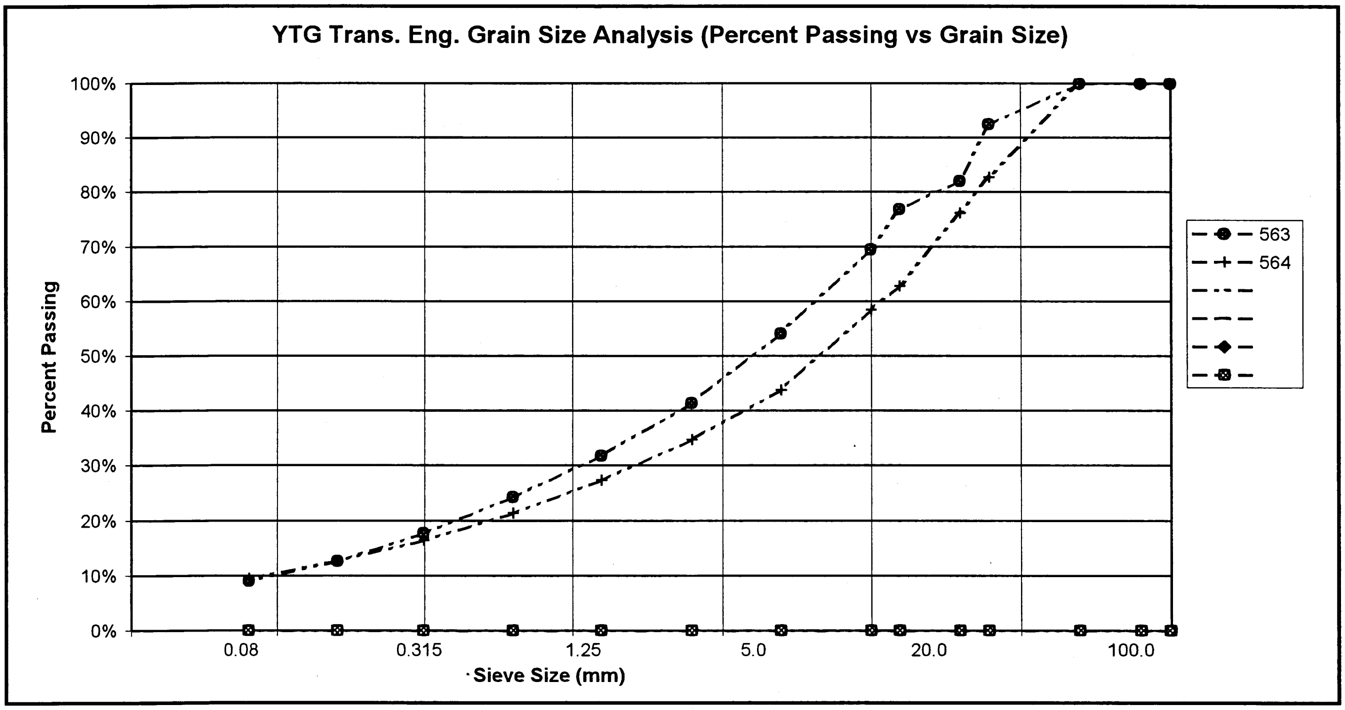
DATE COMP: 2001/08/01

FIELD NO:	561	562				
LAB NO:	1308	1309				
DEPTH:	2.0-2.2	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	100%				
20.0	97%	88%				
12.5	89%	78%				
10.0	86%	74%				
5.0	77%	64%				
2.5	69%	57%				
1.25	62%	51%				
0.630	56%	46%				
0.315	49%	41%				
0.160	42%	37%				
0.080	35%	31%				
M.C.(%):	8%	7%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	23	36				
% SAND:	41	34				
% FINES:	35	31				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)				



PROJECT NUMBER: 092-202101-0361-1 HOLE No.: 611-327
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1739+820 9M LT
LOGGED BY: D.T. DATE COMP: 2001/08/02

FIELD NO:	563	564				
LAB NO:	1310	1311				
DEPTH:	1.2-1.4	4.2-4.4				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	93%	83%				
20.0	82%	76%				
12.5	77%	63%				
10.0	69%	58%				
5.0	54%	44%				
2.5	41%	35%				
1.25	32%	27%				
0.630	24%	21%				
0.315	18%	16%				
0.160	13%	13%				
0.080	9%	9%				
M.C.(%):	3%	4%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	46	56				
% SAND:	45	34				
% FINES:	9	9				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				

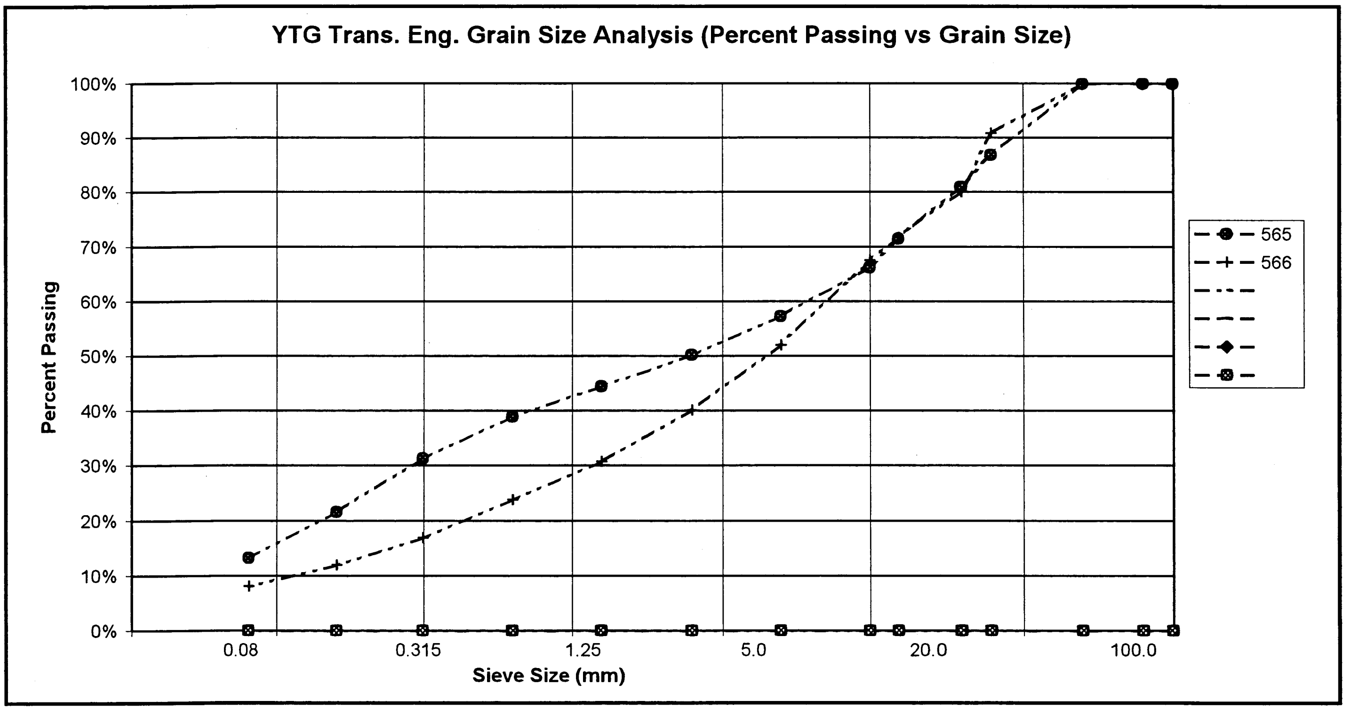


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1739+820 20M LT
LOGGED BY: D.T.

HOLE No.: 611-328

DATE COMP: 2001/08/02

FIELD NO:	565	566				
LAB NO:	1312	1313				
DEPTH:	1.4-1.6	4.2-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	87%	91%				
20.0	81%	80%				
12.5	71%	72%				
10.0	66%	67%				
5.0	57%	52%				
2.5	50%	40%				
1.25	44%	31%				
0.630	39%	24%				
0.315	31%	17%				
0.160	22%	12%				
0.080	13%	8%				
M.C.(%):	3%	3%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	43	48				
% SAND:	44	44				
% FINES:	13	8				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				

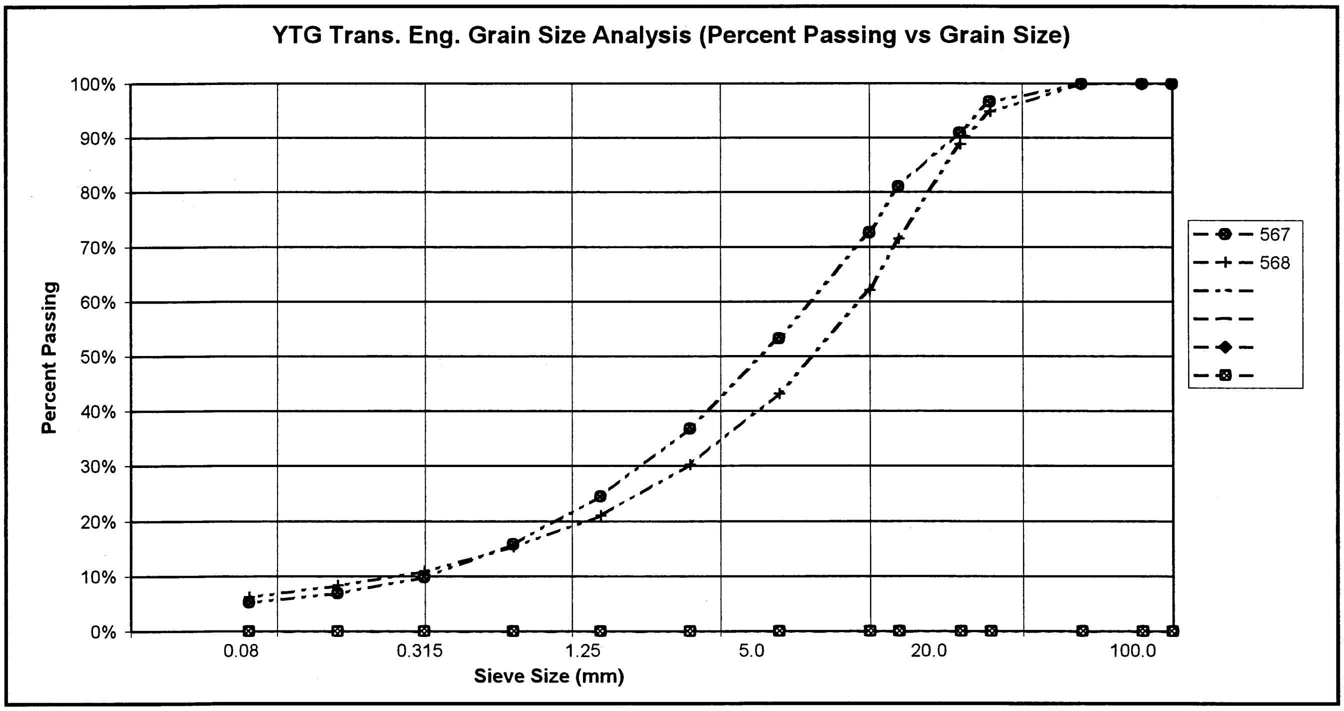


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1739+700 8M LT
LOGGED BY: D.T.

HOLE No.: 611-329

DATE COMP: 2001/08/02

FIELD NO:	567	568				
LAB NO:	1314	1315				
DEPTH:	1.2-1.4	4.2-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	97%	95%				
20.0	91%	89%				
12.5	81%	71%				
10.0	73%	62%				
5.0	53%	43%				
2.5	37%	30%				
1.25	25%	21%				
0.630	16%	15%				
0.315	10%	11%				
0.160	7%	8%				
0.080	5%	6%				
M.C.(%):	1%	2%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	47	57				
% SAND:	48	37				
% FINES:	5	6				
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				

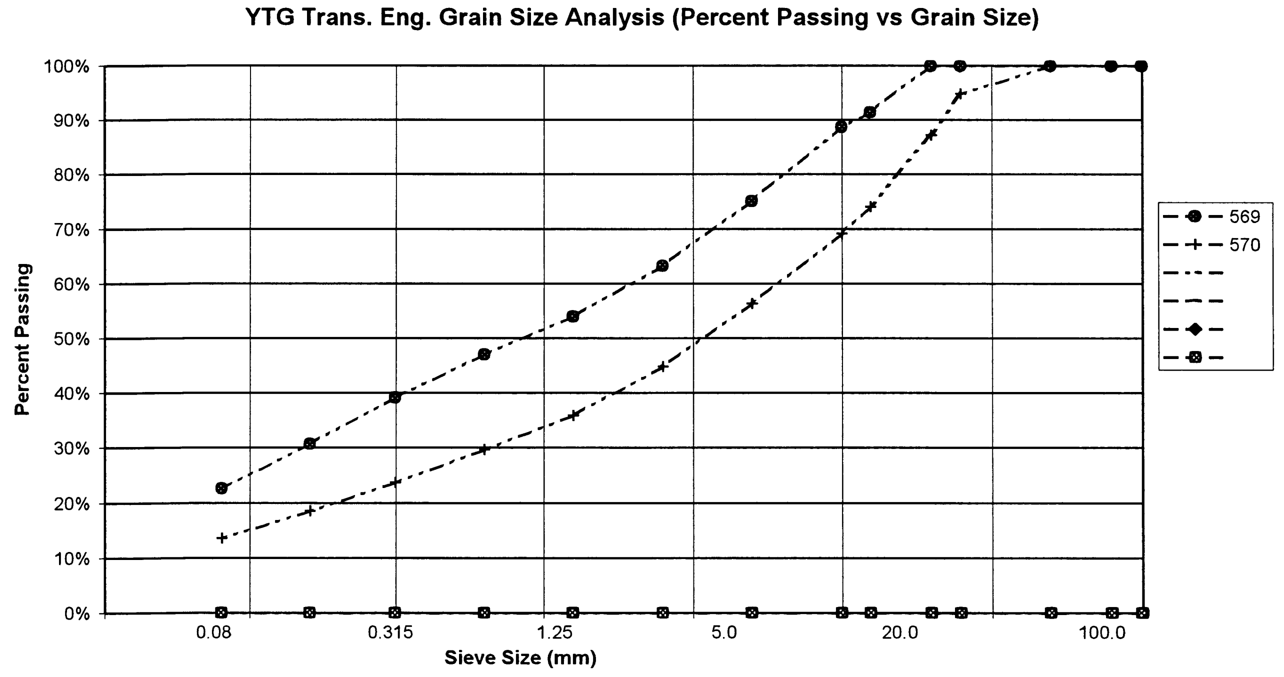


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1739+559 9M LT
LOGGED BY: D.T.

HOLE No.: 611-330

DATE COMP: 2001/08/02

FIELD NO:	569	570				
LAB NO:	1316	1317				
DEPTH:	1.0-1.2	4.2-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	95%				
20.0	100%	87%				
12.5	91%	74%				
10.0	89%	69%				
5.0	75%	56%				
2.5	63%	45%				
1.25	54%	36%				
0.630	47%	30%				
0.315	39%	24%				
0.160	31%	18%				
0.080	23%	14%				
M.C.(%):	8%	5%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	25	44				
% SAND:	53	43				
% FINES:	23	14				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)				

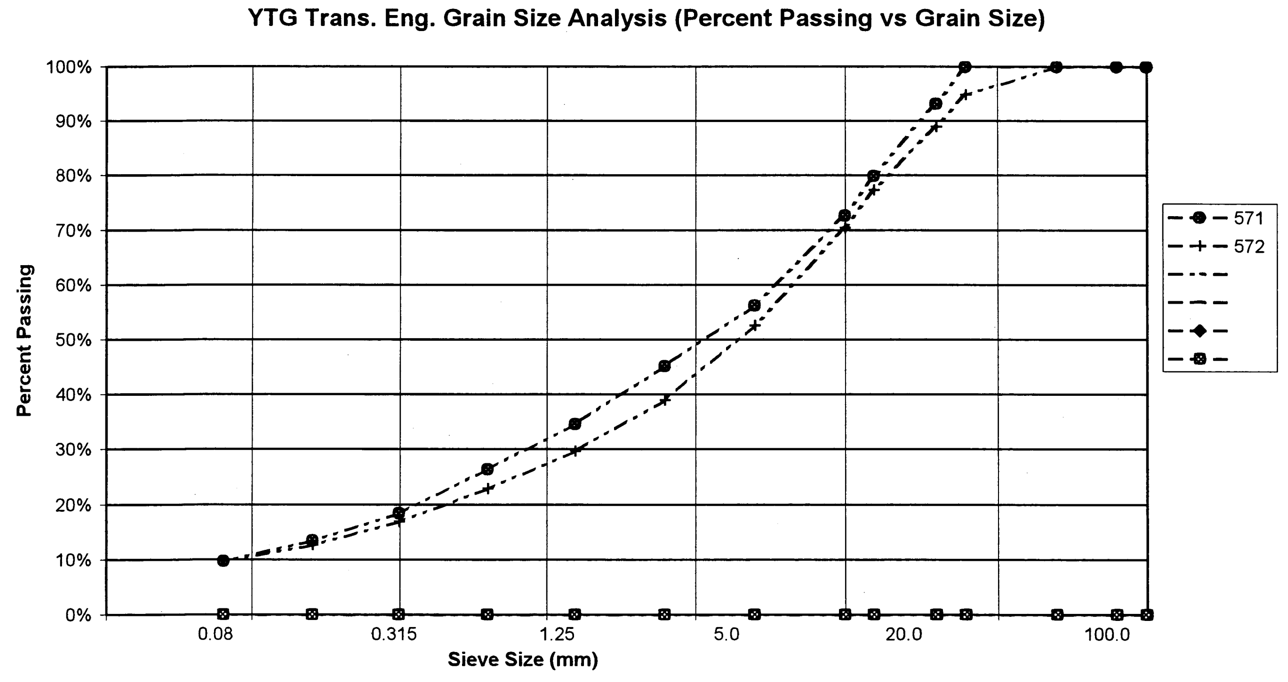


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1739+559 20M LT
LOGGED BY: D.T.

HOLE No.: 611-331

DATE COMP: 2001/08/02

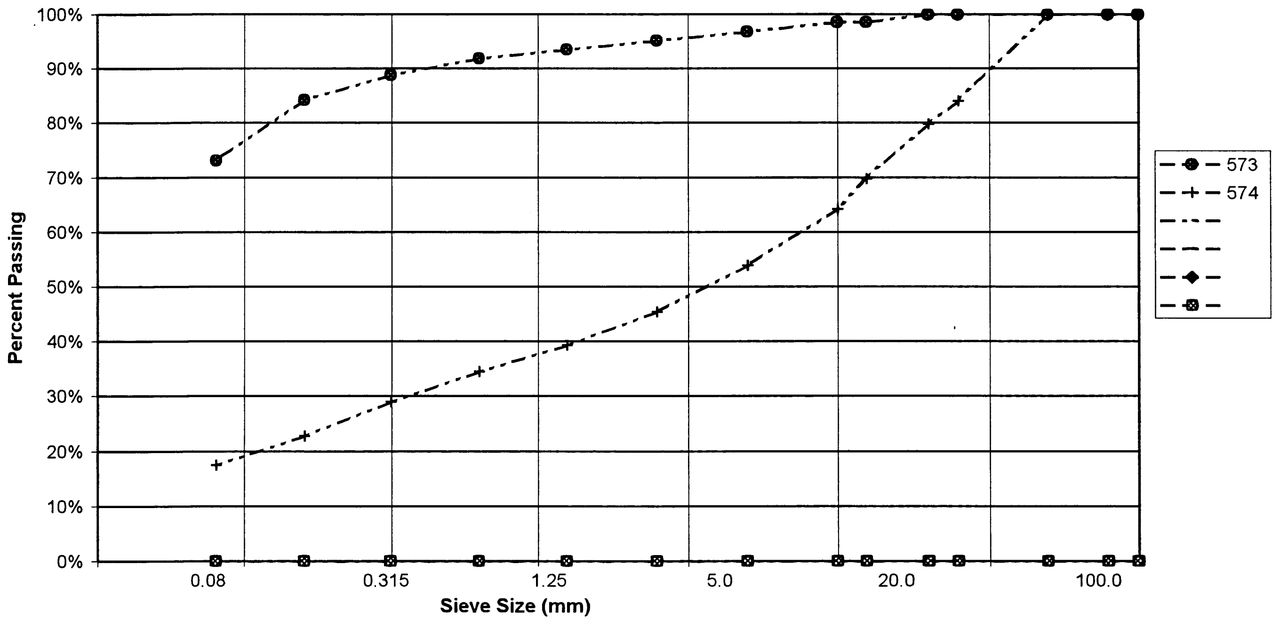
FIELD NO:	571	572				
LAB NO:	1318	1319				
DEPTH:	1.3-1.5	4.2-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	95%				
20.0	93%	89%				
12.5	80%	77%				
10.0	73%	70%				
5.0	56%	53%				
2.5	45%	39%				
1.25	35%	30%				
0.630	26%	23%				
0.315	18%	17%				
0.160	13%	13%				
0.080	10%	10%				
M.C.(%):	4%	4%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	44	47				
% SAND:	47	43				
% FINES:	10	10				
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)				



PROJECT NUMBER: 092-202101-0361-1
HOLE No.: 611-332
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1739+425 11M LT
LOGGED BY: D.T.
DATE COMP: 2001/08/02

FIELD NO:	573	574				
LAB NO:	1320	1321				
DEPTH:	1.4-1.6	4.0-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	84%				
20.0	100%	80%				
12.5	99%	70%				
10.0	99%	64%				
5.0	97%	54%				
2.5	95%	45%				
1.25	94%	39%				
0.630	92%	35%				
0.315	89%	29%				
0.160	84%	23%				
0.080	73%	18%				
M.C.(%):	27%	11%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	3	46				
% SAND:	24	36				
% FINES:	73	18				
CLASSIFICATION	SILT WITH SAND (ML)	SILTY GRAVEL WITH SAND (GM)				

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



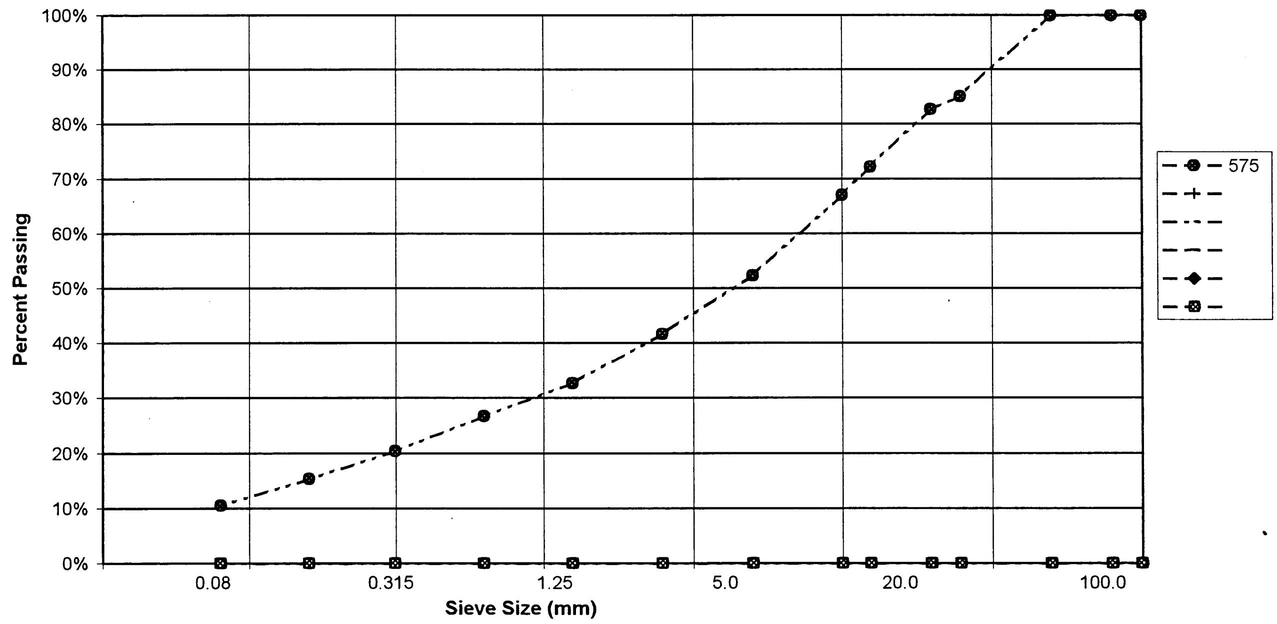
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1739+329 15M LT
LOGGED BY: B.B.

HOLE No.: 612-333

DATE COMP: 2001/07/23

FIELD NO:	575					
LAB NO:	1322					
DEPTH:	2.0-2.2					
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**					
100.0	100%					
80.0	100%					
50.0	100%					
25.0	85%					
20.0	83%					
12.5	72%					
10.0	67%					
5.0	52%					
2.5	42%					
1.25	33%					
0.630	27%					
0.315	20%					
0.160	15%					
0.080	11%					
M.C.(%):	8%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	48					
% SAND:	42					
% FINES:	11					
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)					

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

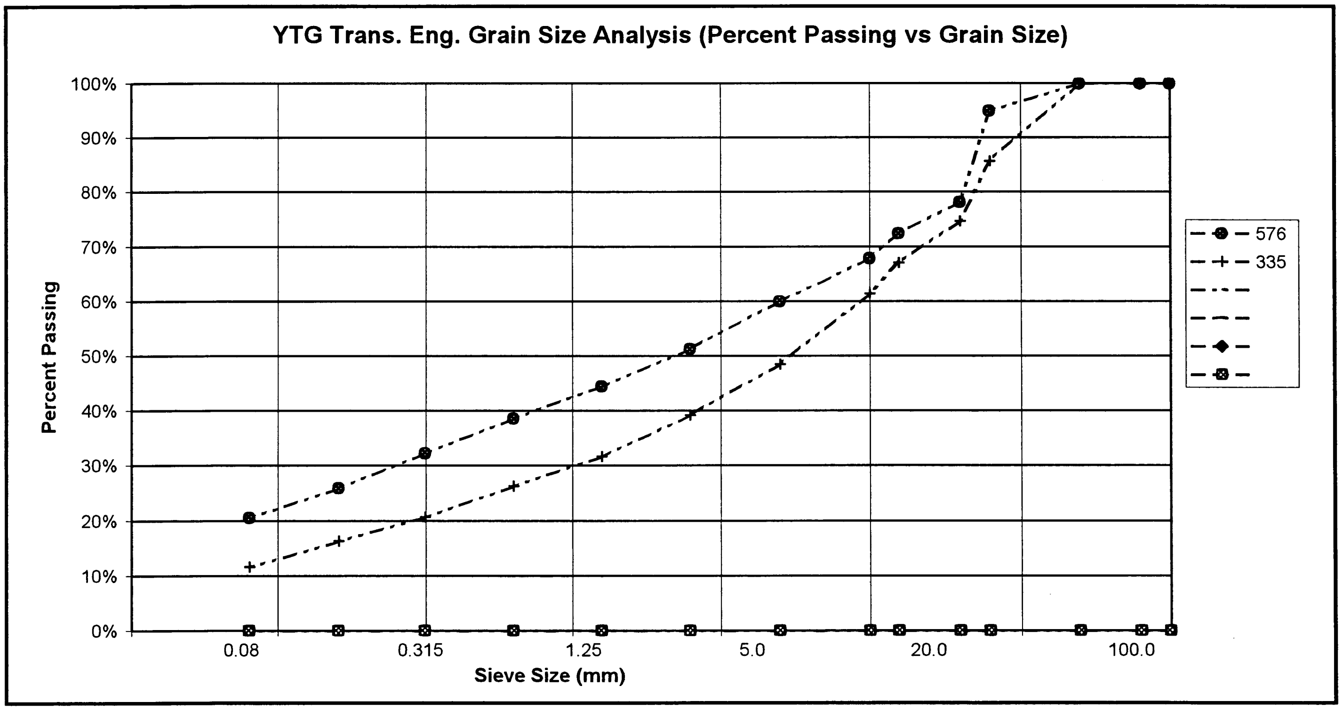


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1739+559 20 M RT
LOGGED BY: B.B.

HOLE No.: 612-335

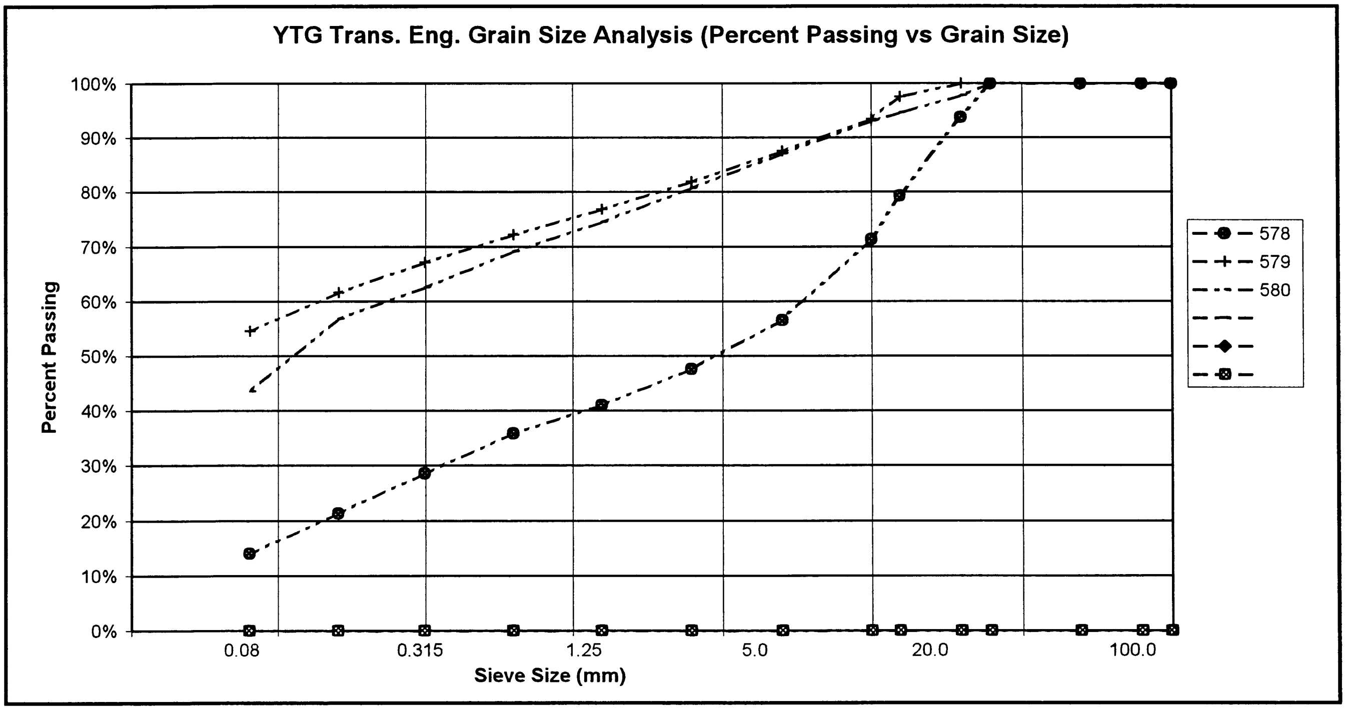
DATE COMP: 2001/08/02

FIELD NO:	576	335				
LAB NO:	1323	1324				
DEPTH:	1.8-2.0	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	95%	86%				
20.0	78%	75%				
12.5	72%	67%				
10.0	68%	61%				
5.0	60%	48%				
2.5	51%	39%				
1.25	45%	32%				
0.630	39%	26%				
0.315	32%	21%				
0.160	26%	16%				
0.080	21%	12%				
M.C.(%):	9%	5%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	40	52				
% SAND:	39	37				
% FINES:	21	12				
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				



PROJECT NUMBER: 092-202101-0361-1 HOLE No.: 612-336
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1739+820 20M RT
LOGGED BY: B.B. DATE COMP: 2001/08/02

FIELD NO:	578	579	580			
LAB NO:	1325	1326	1327			
DEPTH:	1.2-1.4	2.9-3.1	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	94%	100%	98%			
12.5	79%	98%	95%			
10.0	71%	93%	93%			
5.0	57%	88%	87%			
2.5	48%	82%	81%			
1.25	41%	77%	75%			
0.630	36%	72%	69%			
0.315	29%	67%	63%			
0.160	21%	62%	57%			
0.080	14%	55%	43%			
M.C.(%):	5%	10%	8%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	43	12	13			
% SAND:	42	33	44			
% FINES:	14	55	43			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SANDY SILT (ML)	SILTY SAND (SM)			

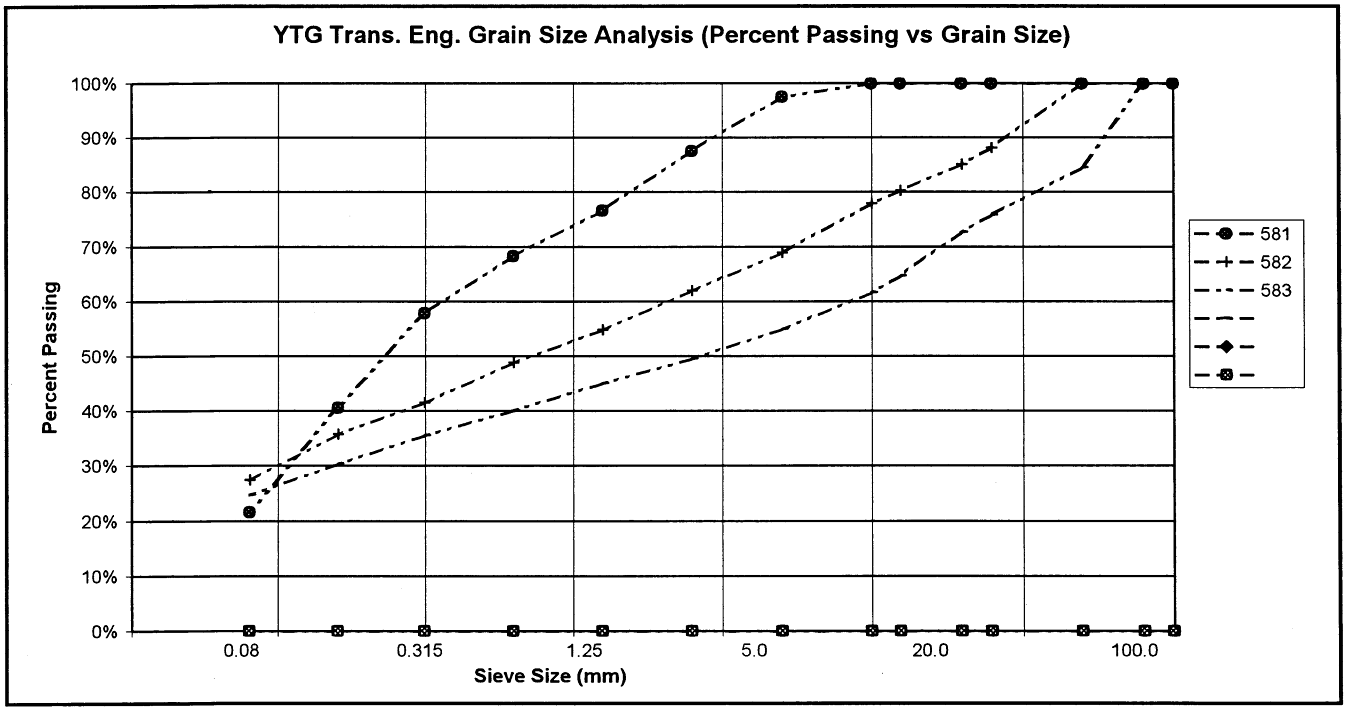


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1470+000 14M RT
LOGGED BY: B.B.

HOLE No.: 612-337

DATE COMP: 2001/08/02

FIELD NO:	581	582	583			
LAB NO:	1328	1329	1330			
DEPTH:	0.8-1.0	3.0-3.2	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	85%			
25.0	100%	88%	76%			
20.0	100%	85%	73%			
12.5	100%	80%	65%			
10.0	100%	78%	62%			
5.0	98%	69%	55%			
2.5	88%	62%	50%			
1.25	77%	55%	45%			
0.630	68%	49%	40%			
0.315	58%	42%	36%			
0.160	41%	36%	30%			
0.080	22%	27%	25%			
M.C.(%):	11%	8%	6%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	2	31	45			
% SAND:	76	42	30			
% FINES:	22	27	25			
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)			

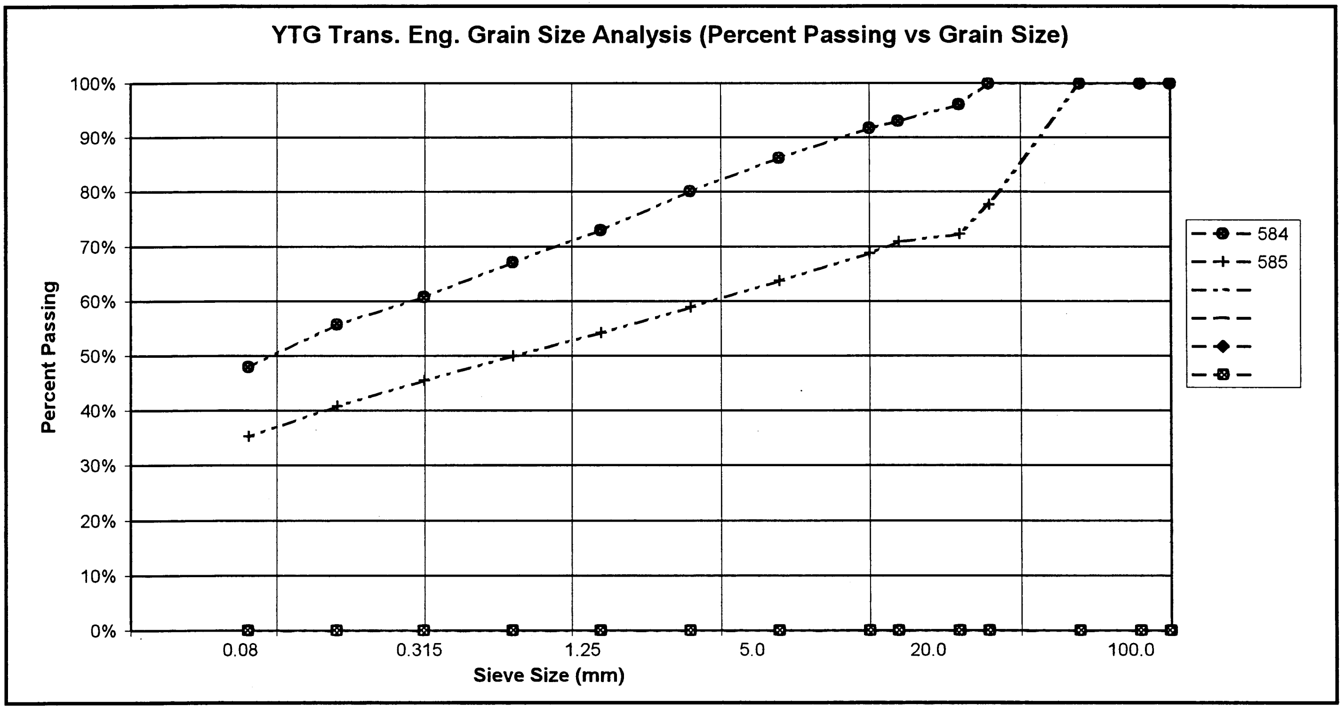


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1740+264 20M RT
LOGGED BY: B.B.

HOLE No.: 612-338

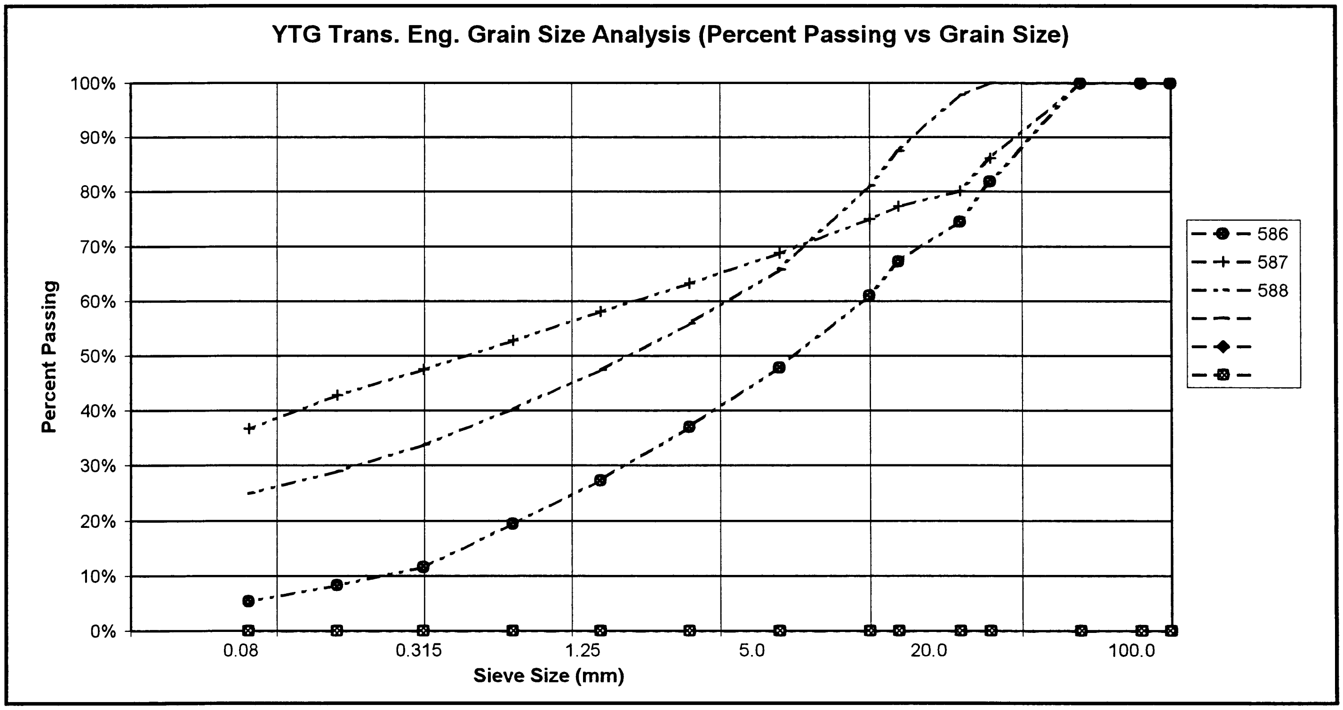
DATE COMP: 2001/08/02

FIELD NO:	584	585				
LAB NO:	1331	1332				
DEPTH:	1.4-1.6	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	78%				
20.0	96%	72%				
12.5	93%	71%				
10.0	92%	69%				
5.0	86%	64%				
2.5	80%	59%				
1.25	73%	54%				
0.630	67%	50%				
0.315	61%	46%				
0.160	56%	41%				
0.080	48%	35%				
M.C.(%):	10%	10%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	14	36				
% SAND:	38	28				
% FINES:	48	35				
CLASSIFICATION	SILTY SAND (SM)	SILTY GRAVEL WITH SAND (GM)				



PROJECT NUMBER: 092-202101-0361-1
HOLE No.: 612-339
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1741+070 20M RT
LOGGED BY: B.B.
DATE COMP: 2001/08/02

FIELD NO:	586	587	588			
LAB NO:	1333	1334	1335			
DEPTH:	1.2-1.4	2.8-3.0	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	82%	86%	100%			
20.0	74%	80%	98%			
12.5	67%	77%	87%			
10.0	61%	75%	81%			
5.0	48%	69%	66%			
2.5	37%	63%	56%			
1.25	27%	58%	47%			
0.630	19%	53%	40%			
0.315	12%	48%	34%			
0.160	8%	43%	29%			
0.080	5%	37%	25%			
M.C.(%):	3%	14%	8%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	52	31	34			
% SAND:	43	32	41			
% FINES:	5	37	25			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			

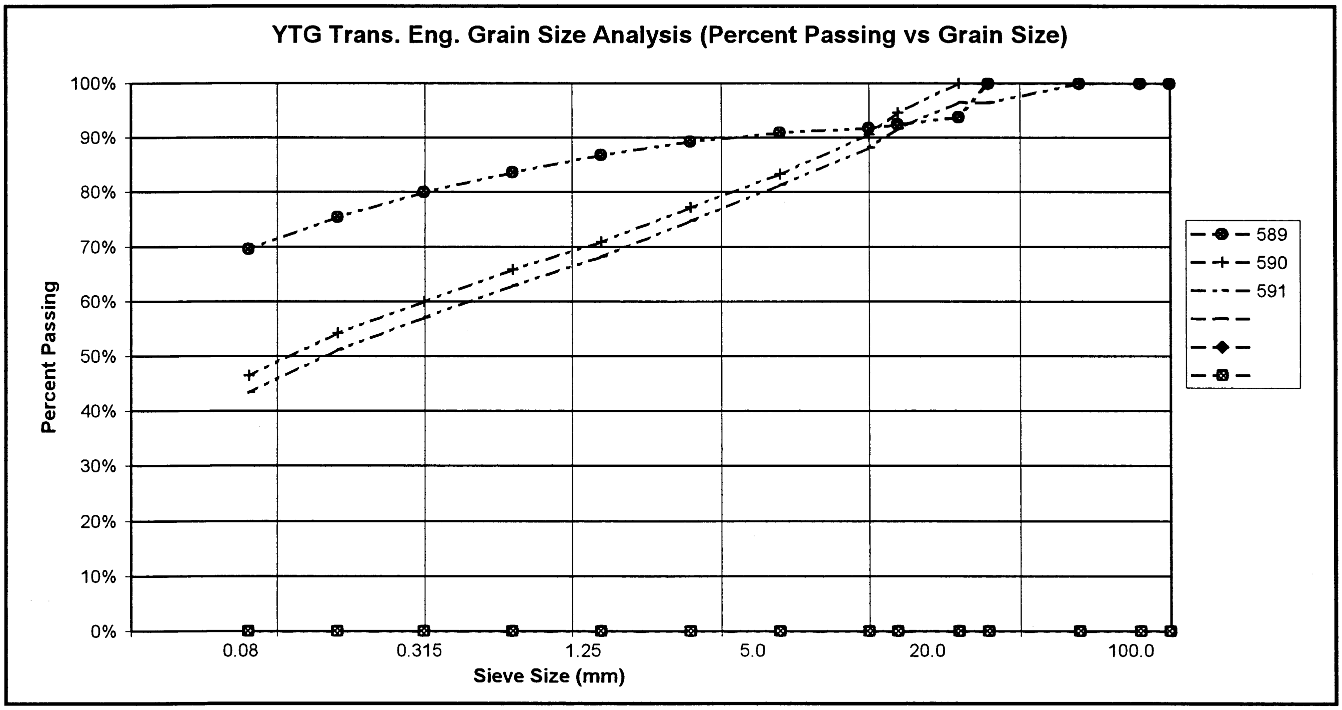


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1739+220 13M LT
LOGGED BY: B.B.

HOLE No.: 612-340

DATE COMP: 2001/08/02

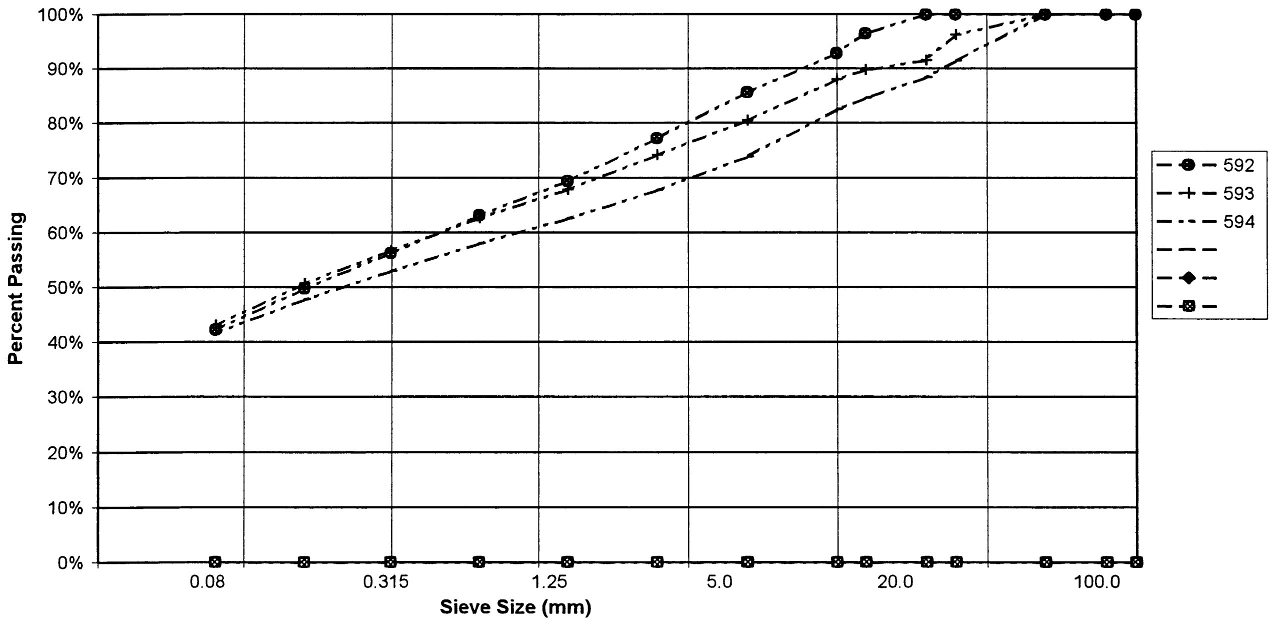
FIELD NO:	589	590	591			
LAB NO:	1336	1337	1338			
DEPTH:	0.7-0.9	2.9-3.1	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	96%			
20.0	94%	100%	96%			
12.5	93%	95%	92%			
10.0	92%	91%	88%			
5.0	91%	83%	81%			
2.5	89%	77%	75%			
1.25	87%	71%	68%			
0.630	84%	66%	63%			
0.315	80%	60%	57%			
0.160	76%	54%	51%			
0.080	70%	46%	43%			
M.C.(%):	21%	13%	11%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	9	17	19			
% SAND:	21	37	38			
% FINES:	70	46	43			
CLASSIFICATION	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



PROJECT NUMBER: 092-202101-0361-1
HOLE No.: 612-341
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1739+100 12M LT
LOGGED BY: B.B.
DATE COMP: 2001/08/03

FIELD NO:	592	593	594			
LAB NO:	1339	1340	1341			
DEPTH:	1.2-1.4	3.0-3.2	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	96%	91%			
20.0	100%	92%	88%			
12.5	97%	90%	85%			
10.0	93%	88%	82%			
5.0	86%	80%	74%			
2.5	77%	74%	68%			
1.25	69%	68%	63%			
0.630	63%	63%	58%			
0.315	56%	57%	53%			
0.160	50%	51%	48%			
0.080	42%	43%	42%			
M.C.(%):	9%	8%	9%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	14	20	26			
% SAND:	43	37	32			
% FINES:	42	43	42			
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



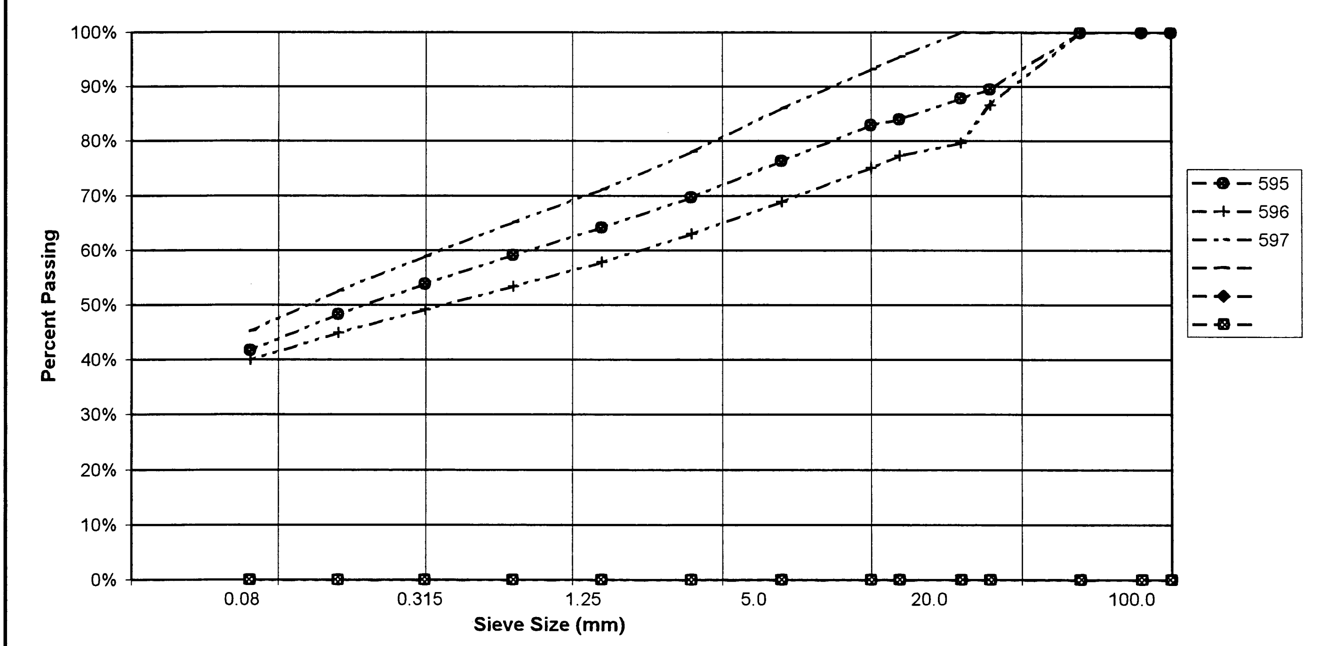
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1739+000 25M LT
LOGGED BY: B.B.

HOLE No.: 612-342

DATE COMP: 2001/08/03

FIELD NO:	595	596	597			
LAB NO:	1342	1343	1344			
DEPTH:	1.4-1.6	2.8-3.0	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	90%	87%	100%			
20.0	88%	80%	100%			
12.5	84%	77%	96%			
10.0	83%	75%	93%			
5.0	76%	69%	86%			
2.5	70%	63%	78%			
1.25	64%	58%	71%			
0.630	59%	53%	65%			
0.315	54%	49%	59%			
0.160	48%	45%	53%			
0.080	42%	40%	45%			
M.C.(%):	13%	8%	9%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	24	31	14			
% SAND:	35	29	41			
% FINES:	42	40	45			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND (SM)			

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



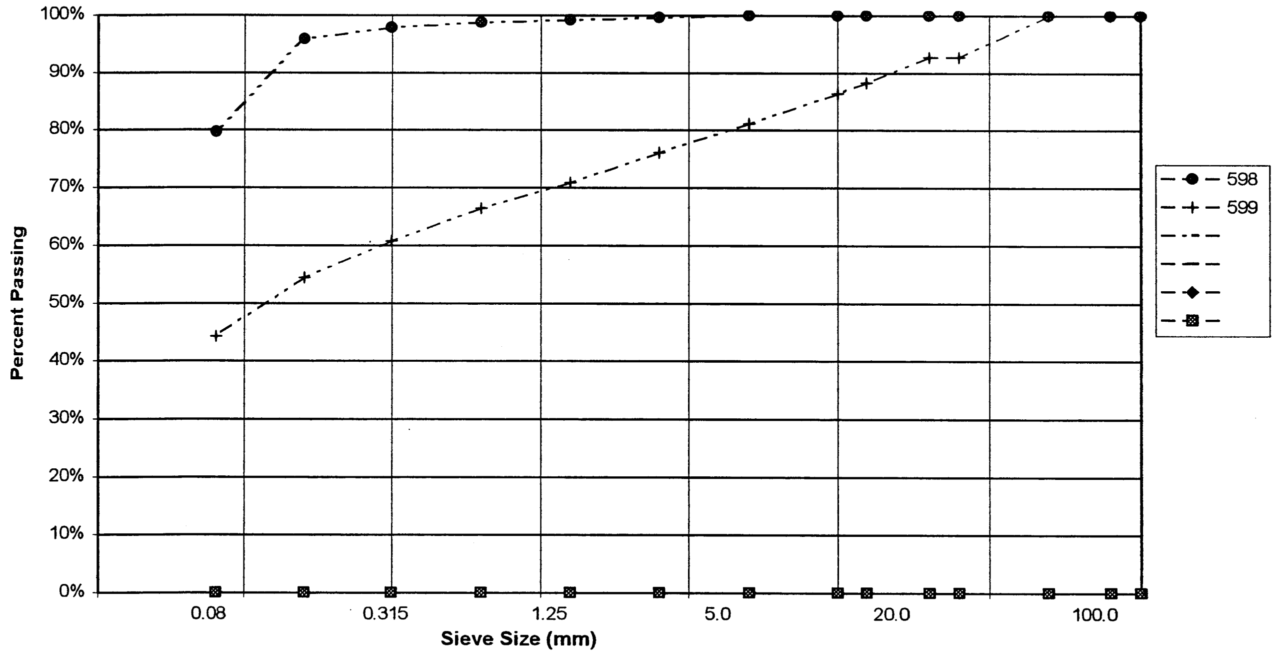
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1734+781 BK; 1738+919 AH 32m LT
LOGGED BY: B.B.

HOLE No.: 612-343

DATE COMP: 2001/08/03

FIELD NO:	598	599				
LAB NO:	1345	1346				
DEPTH:	1.5-1.7	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	93%				
20.0	100%	93%				
12.5	100%	88%				
10.0	100%	86%				
5.0	100%	81%				
2.5	100%	76%				
1.25	99%	71%				
0.630	99%	66%				
0.315	98%	61%				
0.160	96%	54%				
0.080	80%	44%				
M.C.(%):	28%	14%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	0	19				
% SAND:	20	37				
% FINES:	80	44				
CLASSIFICATION	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)				

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

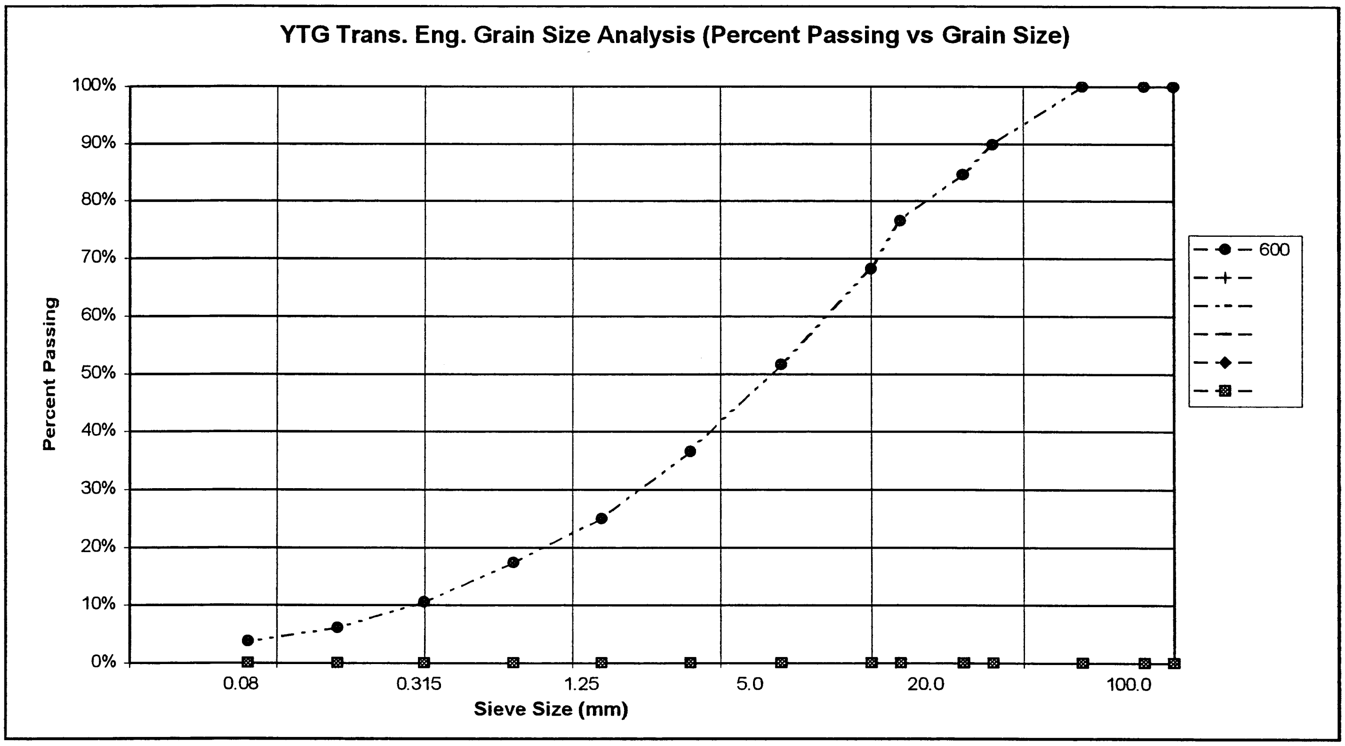


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1734+666 BK; 1738+804 AH 82m LT
LOGGED BY: B.B.

HOLE No.: 612-344

DATE COMP: 2001/08/03

FIELD NO:	600					
LAB NO:	1347					
DEPTH:	1.3-1.5					
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING					
100.0	100%					
80.0	100%					
50.0	100%					
25.0	90%					
20.0	85%					
12.5	77%					
10.0	68%					
5.0	52%					
2.5	37%					
1.25	25%					
0.630	17%					
0.315	11%					
0.160	6%					
0.080	4%					
M.C.(%):	7%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	48					
% SAND:	48					
% FINES:	4					
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)					

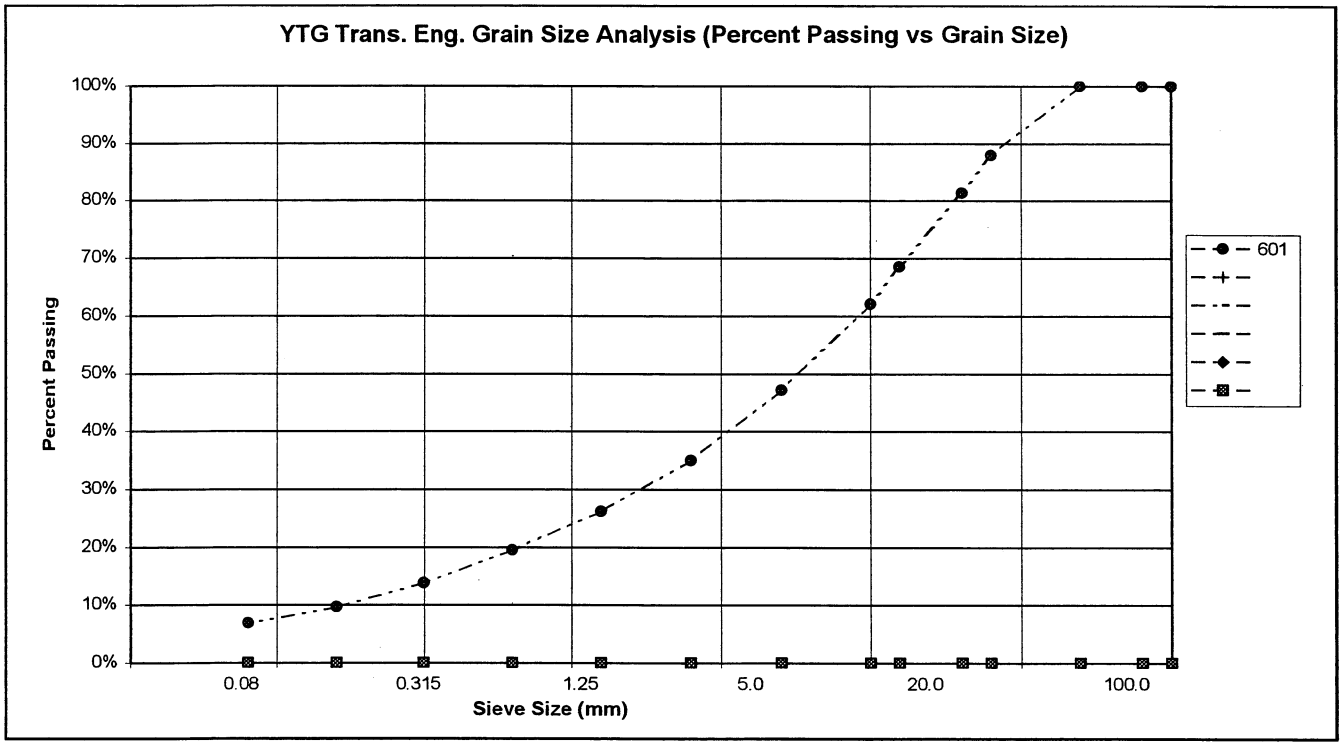

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1734+603 BK; 1738+741 AH 21m LT
LOGGED BY: B.B.

HOLE No.: 612-345

DATE COMP: 2001/08/03

FIELD NO:	601					
LAB NO:	1348					
DEPTH:	1.2-1.4					
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**					
100.0	100%					
80.0	100%					
50.0	100%					
25.0	88%					
20.0	81%					
12.5	69%					
10.0	62%					
5.0	47%					
2.5	35%					
1.25	26%					
0.630	20%					
0.315	14%					
0.160	10%					
0.080	7%					
M.C.(%):	2%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	53					
% SAND:	40					
% FINES:	7					
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)					



PROJECT NUMBER: 092-202101-0361-1

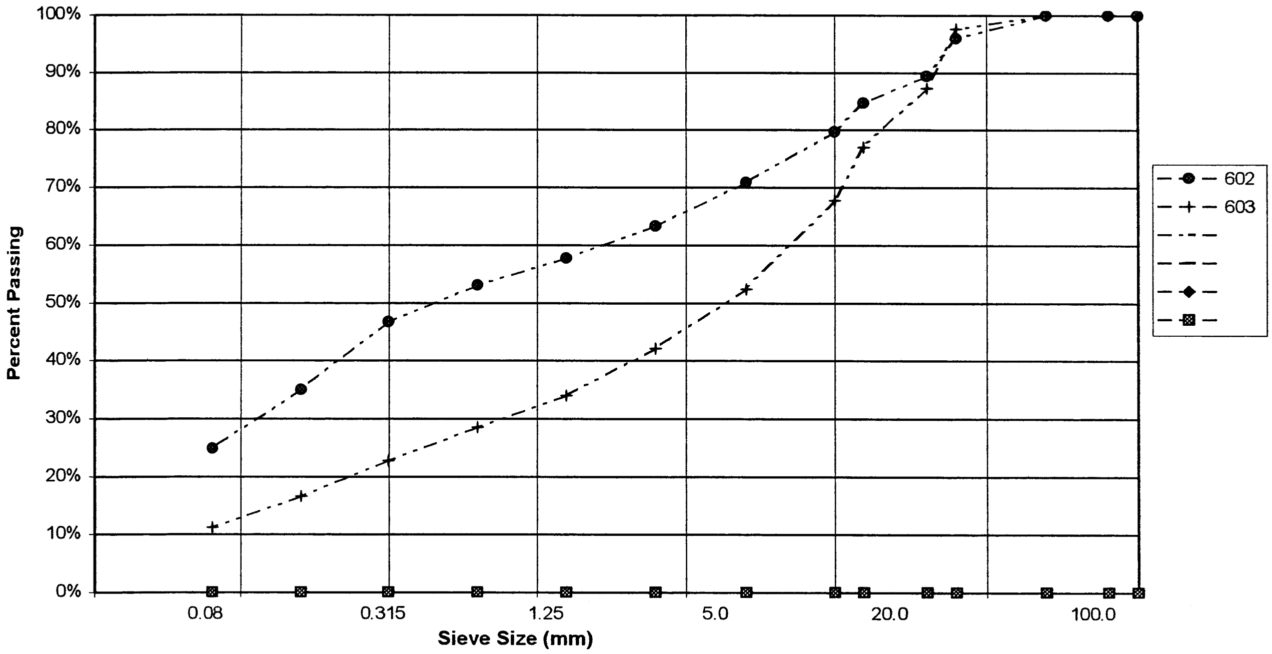
HOLE No.: 612-346

CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1734+404 BK; 1738+542 AH 13m LT
LOGGED BY: B.B.

DATE COMP: 2001/08/03

FIELD NO:	602	603				
LAB NO:	1349	1350				
DEPTH:	1.2-1.4	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	96%	98%				
20.0	89%	87%				
12.5	85%	77%				
10.0	80%	68%				
5.0	71%	52%				
2.5	63%	42%				
1.25	58%	34%				
0.630	53%	29%				
0.315	47%	23%				
0.160	35%	17%				
0.080	25%	11%				
M.C.(%):	13%	4%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	29	48				
% SAND:	46	41				
% FINES:	25	11				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

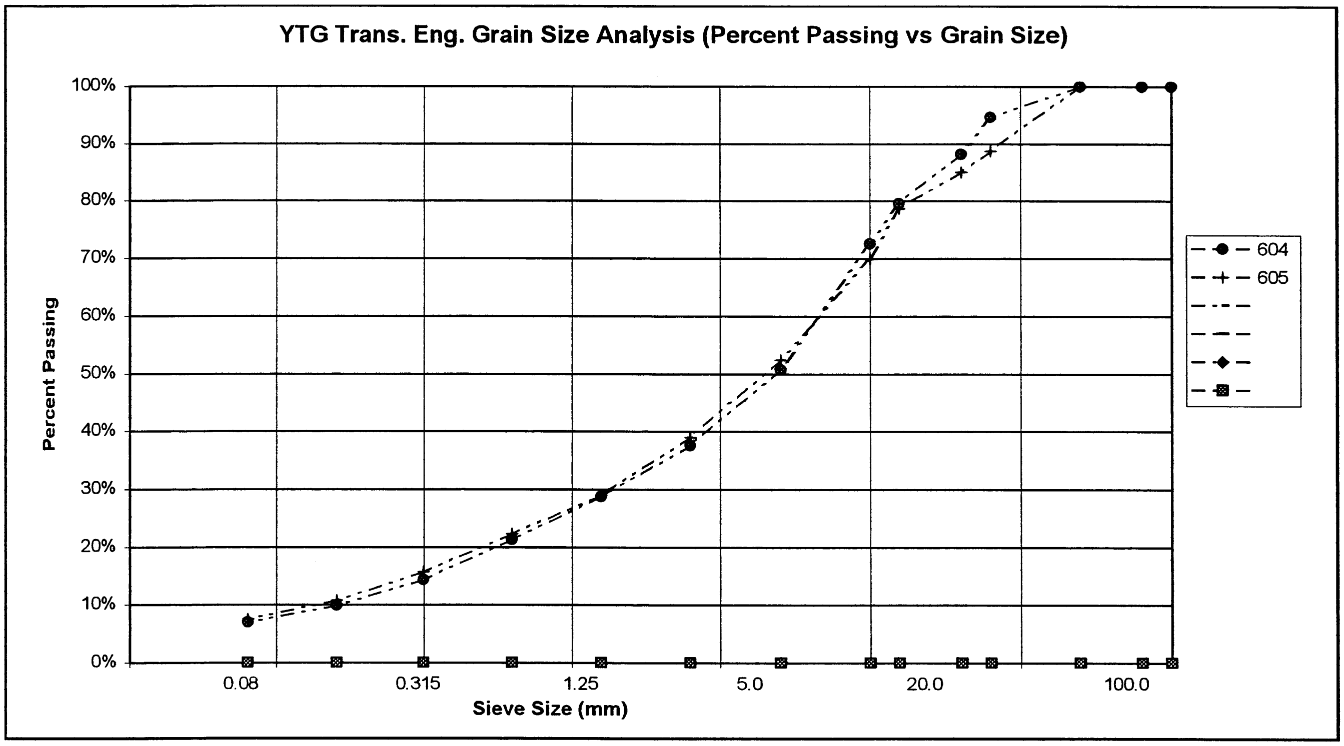


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1734+303 BK; 1738+441 AH C.L.
LOGGED BY: B.B.

HOLE No.: 612-347

DATE COMP: 2001/08/03

FIELD NO:	604	605				
LAB NO:	1351	1352				
DEPTH:	1.4-1.6	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	95%	89%				
20.0	88%	85%				
12.5	80%	79%				
10.0	73%	70%				
5.0	51%	52%				
2.5	38%	39%				
1.25	29%	29%				
0.630	21%	22%				
0.315	14%	16%				
0.160	10%	11%				
0.080	7%	8%				
M.C.(%):	3%	2%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	49	48				
% SAND:	44	45				
% FINES:	7	8				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				

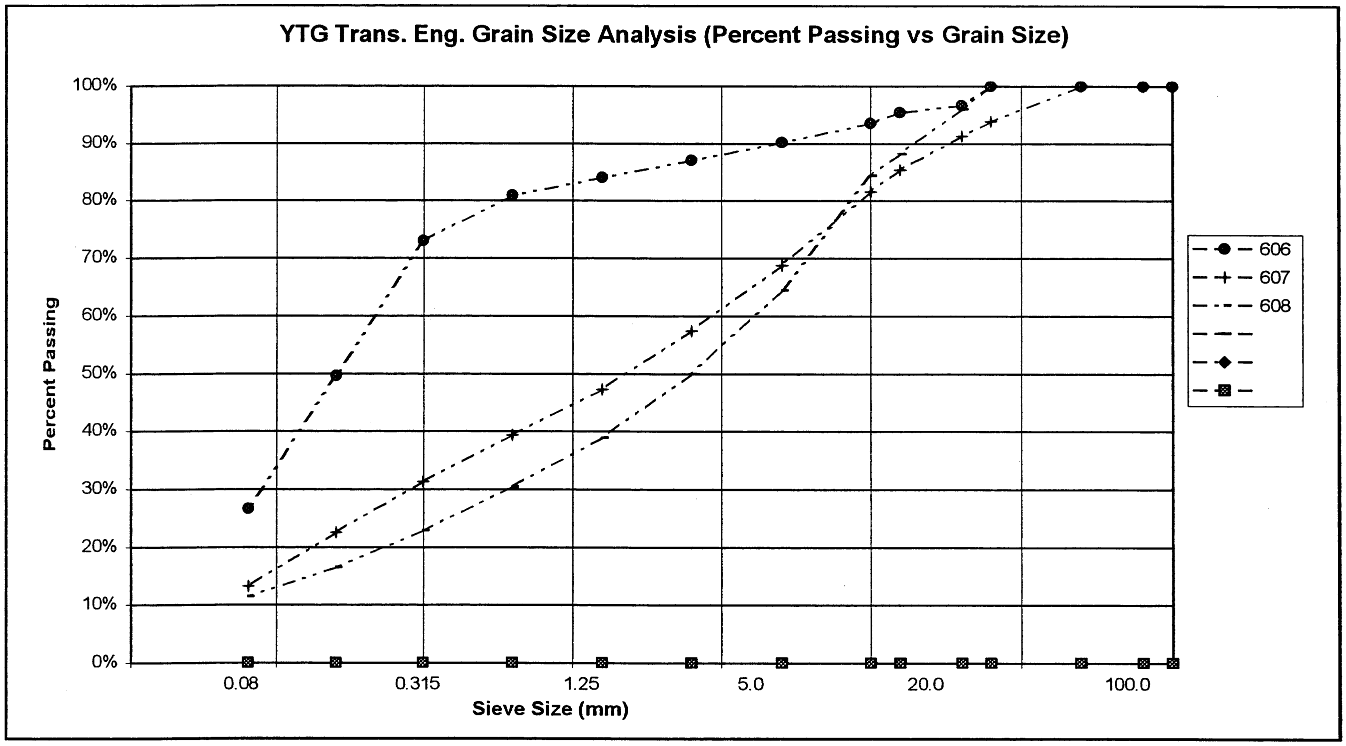


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1734+306 BK; 1738+444 AH 25m LT
LOGGED BY: B.B.

HOLE No.: 612-348

DATE COMP: 2001/08/03

FIELD NO:	606	607	608			
LAB NO:	1353	1354	1355			
DEPTH:	1.3-1.5	2.8-3.0	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	94%	100%			
20.0	97%	91%	96%			
12.5	95%	85%	88%			
10.0	94%	82%	84%			
5.0	90%	69%	64%			
2.5	87%	57%	50%			
1.25	84%	47%	39%			
0.630	81%	39%	30%			
0.315	73%	31%	23%			
0.160	50%	23%	16%			
0.080	27%	13%	11%			
M.C.(%):	3%	2%	2%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	10	31	36			
% SAND:	64	56	53			
% FINES:	27	13	11			
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)			

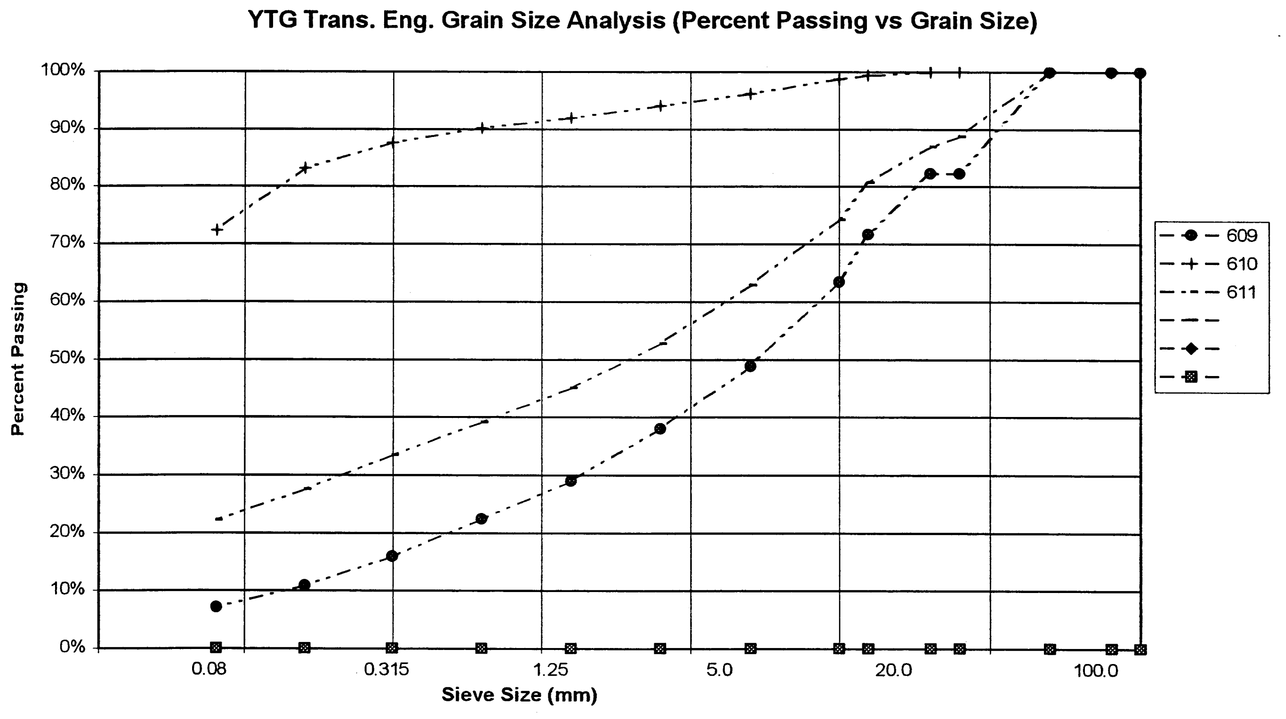


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1734+200 BK; 1738+338 AH 3m RT
LOGGED BY: B.B.

HOLE No.: 612-349

DATE COMP: 2001/08/03

FIELD NO:	609	610	611			
LAB NO:	1356	1357	1358			
DEPTH:	1.3-1.5	2.9-3.1	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	82%	100%	89%			
20.0	82%	100%	87%			
12.5	72%	99%	81%			
10.0	63%	99%	74%			
5.0	49%	96%	63%			
2.5	38%	94%	53%			
1.25	29%	92%	45%			
0.630	22%	90%	39%			
0.315	16%	88%	33%			
0.160	11%	83%	28%			
0.080	7%	72%	22%			
M.C.(%):	4%	27%	9%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	51	4	37			
% SAND:	42	24	41			
% FINES:	7	72	22			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)			



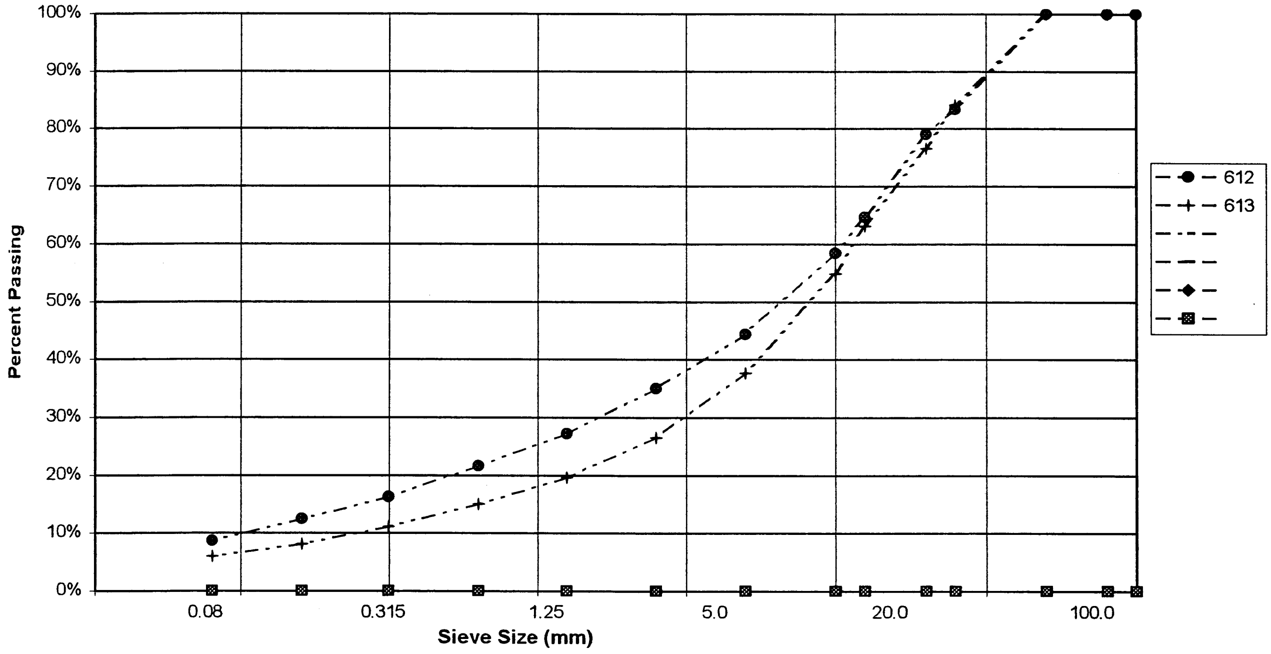
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1734+135 BK; 1738+273 AH 15m LT
LOGGED BY: B.B.

HOLE No.: 612-350

DATE COMP: 2001/08/03

FIELD NO:	612	613				
LAB NO:	1359	1360				
DEPTH:	1.2-1.4	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	83%	84%				
20.0	79%	77%				
12.5	65%	63%				
10.0	58%	55%				
5.0	44%	38%				
2.5	35%	27%				
1.25	27%	20%				
0.630	22%	15%				
0.315	16%	11%				
0.160	12%	8%				
0.080	9%	6%				
M.C.(%):	5%	2%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	56	62				
% SAND:	36	32				
% FINES:	9	6				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)				

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



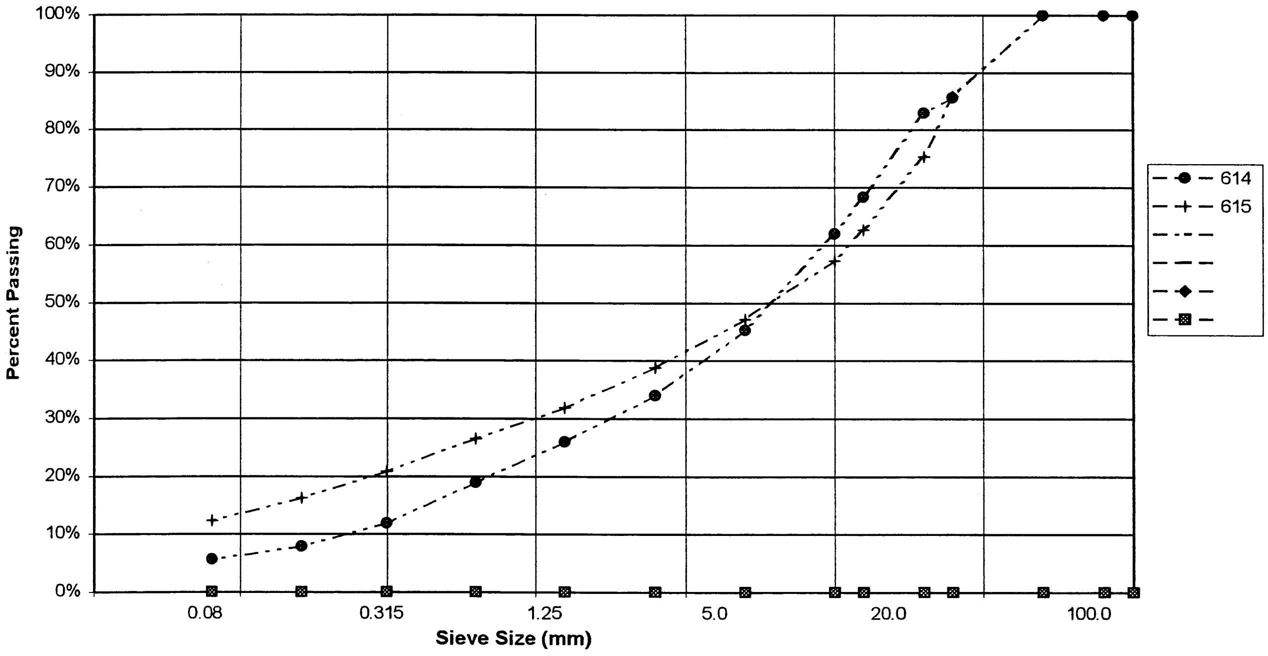
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1734+135 BK; 1738+273 AH C.L.
LOGGED BY: B.B.

HOLE No.: 612-351

DATE COMP: 2001/08/03

FIELD NO:	614	615				
LAB NO:	1361	1362				
DEPTH:	1.4-1.6	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	86%	86%				
20.0	83%	75%				
12.5	68%	63%				
10.0	62%	57%				
5.0	45%	47%				
2.5	34%	39%				
1.25	26%	32%				
0.630	19%	27%				
0.315	12%	21%				
0.160	8%	16%				
0.080	6%	12%				
M.C.(%):	4%	5%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	55	53				
% SAND:	40	35				
% FINES:	6	12				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY GRAVEL WITH SAND (GM)				

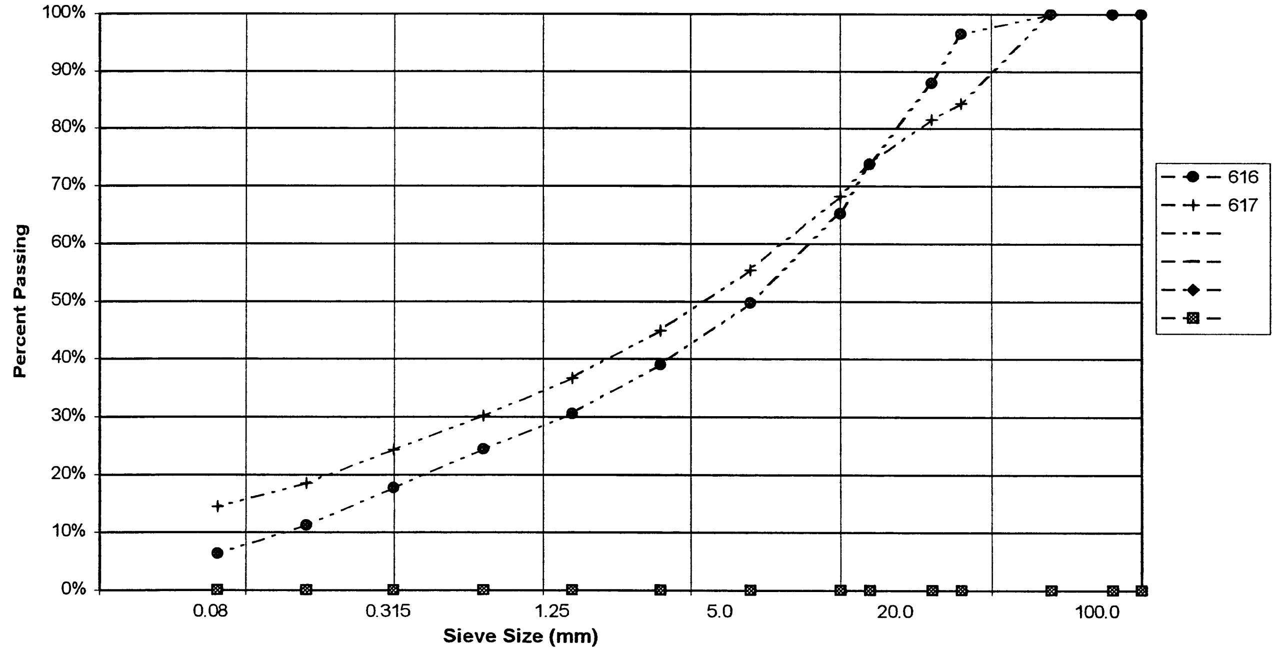
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0361-1
HOLE No.: 612-352
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1734+140 BK; 1738+278 AH 15m RT
LOGGED BY: B.B.
DATE COMP: 2001/08/03

FIELD NO:	616	617				
LAB NO:	1363	1364				
DEPTH:	1.3-1.5	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	96%	84%				
20.0	88%	82%				
12.5	74%	74%				
10.0	65%	68%				
5.0	50%	55%				
2.5	39%	45%				
1.25	31%	37%				
0.630	24%	30%				
0.315	18%	24%				
0.160	11%	19%				
0.080	6%	14%				
M.C.(%):	5%	6%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	50	45				
% SAND:	43	41				
% FINES:	6	14				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY GRAVEL WITH SAND (GM)				

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

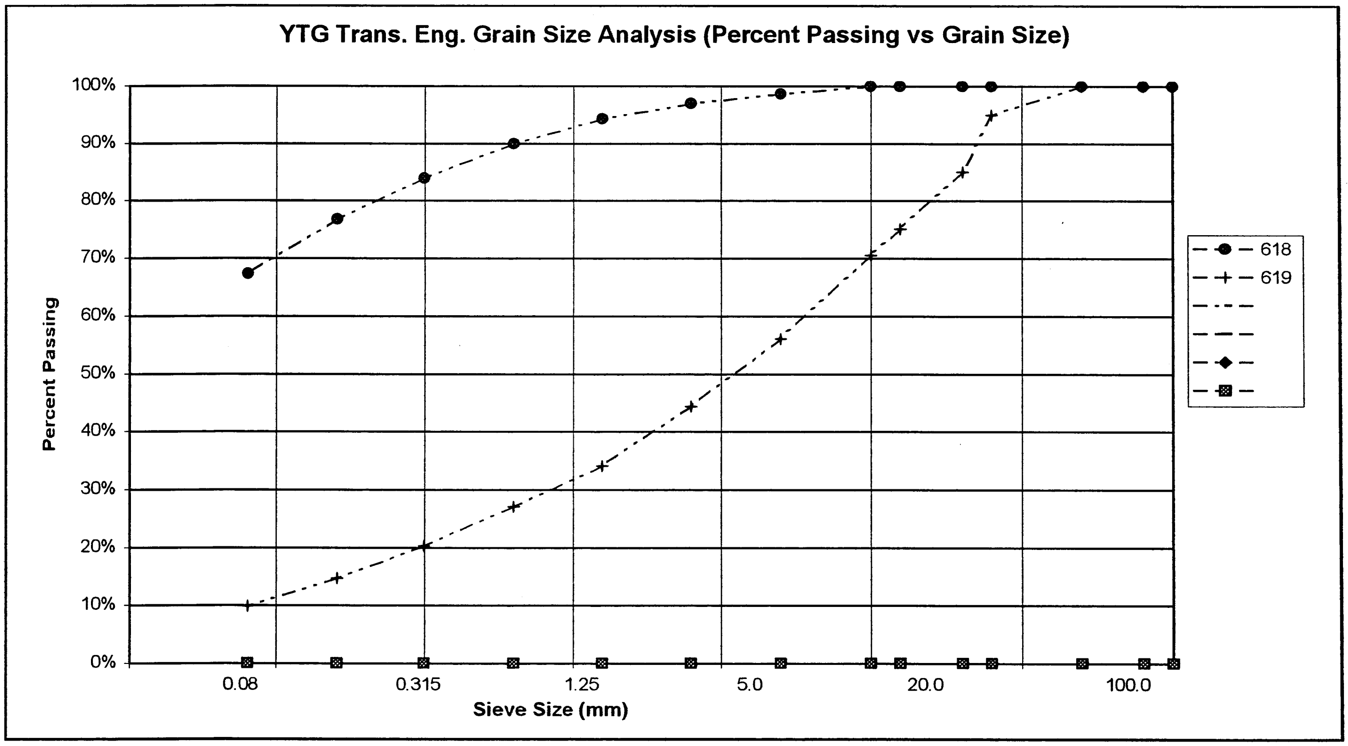


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1734+025 BK; 1738+163 AH 3m RT
LOGGED BY: B.B.

HOLE No.: 612-353

DATE COMP: 2001/08/03

FIELD NO:	618	619				
LAB NO:	1365	1366				
DEPTH:	1.3-1.5	2.9-3.1				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	95%				
20.0	100%	85%				
12.5	100%	75%				
10.0	100%	71%				
5.0	99%	56%				
2.5	97%	44%				
1.25	94%	34%				
0.630	90%	27%				
0.315	84%	20%				
0.160	77%	15%				
0.080	67%	10%				
M.C.(%):	30%	4%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	1	44				
% SAND:	31	46				
% FINES:	67	10				
CLASSIFICATION	SANDY SILT (ML)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)				



GEOTECHNICAL INVESTIGATIONS

Highway Construction
Km 1738.3 to 1750.2 Highway #1
Yukon, 2002-2003
Volume 3 of 4

Yukon
Community and Transportation Services
Transportation Engineering Branch

Geotechnical Services

BOX 2703, WHITEHORSE, YUKON
PHONE 867-667-8820 FAX 867-393-6447

ORIGINAL - Do Not Remove From File

Highway Construction
Km 1738.3 to 1750.2
Alaska Highway #1
Yukon 2002-2003
Volume 3 of 4

This Data Package prepared for project viewing:

March, 2002

Transportation Engineering Branch
Geotechnical Services
461 Range Road
Whitehorse, Yukon

GEOTECHNICAL INVESTIGATION
Km 1738.3 to 1750.2
YUKON 2002-2003

CONTENTS

Volume 1 of 4

INTRODUCTION

Investigation notes, classification methods and legends.

CENTRELINE TESTING ALASKA HIGHWAY

Subsurface Exploration and Testing ReportSheets are provided.
The reports for the centreline holes are arranged according to project location, starting at Km 1775+500 and increasing to Km 1786+500.

TEST HOLES 1292 to 1326	shown with prefix 541-
TEST HOLES 1327 to 1333	shown with prefix 542-
TEST HOLES 1334 to 1369	shown with prefix 543-
TEST HOLES 1370 to 1400	shown with prefix 544-
TEST HOLES 287 to 332	shown with prefix 611-
TEST HOLES 333 to 353	shown with prefix 612-

NOTE:
Centreline Test Hole locations indicated on the Subsurface Exploration and Testing Report Sheets are approximate. Actual Test Hole locations, located by GPS survey or field survey, are as shown on project plans.

CONTENTS (continued)

Volume 2 of 4

CENTRELINE TESTING ALASKA HIGHWAY

Laboratory Testing Result Sheets are provided.
The reports for the centreline holes are arranged according to test hole number, starting at 541-1292 and increasing to 612-353.

TEST HOLES 1292 to 1326	shown with prefix 541-
TEST HOLES 1327 to 1333	shown with prefix 542-
TEST HOLES 1334 to 1369	shown with prefix 543-
TEST HOLES 1370 to 1400	shown with prefix 544-
TEST HOLES 287 to 332	shown with prefix 611-
TEST HOLES 333 to 353	shown with prefix 612-

NOTE:

Centreline Test Hole locations indicated on the Subsurface Exploration and Testing Report Sheets are approximate. Actual Test Hole locations, located by GPS survey or field survey, are as shown on project plans.

CONTENTS (continued)

Volume 3 of 4

GRANULAR SOURCE Km 1738.8 RHS & LHS ALASKA HIGHWAY

Location plans and subsurface exploration and testing report sheets are provided.

Auger Testing

2001	TEST HOLES 344 & 345	shown with prefix 612-
2001	TEST HOLES 1891 to 1904	shown with prefix 622-

Backhoe Testing

2001	TEST PITS 1699 to 1713	shown with prefix 630-

CONTENTS (continued)

Volume 4 of 4

GRANULAR SOURCE Km 1750.0 LHS ALASKA HIGHWAY

Location plans, photographs, and subsurface exploration and testing report sheets are provided.

Auger Testing

1985	TEST HOLES 32 and 37 to 40	shown with prefix 777-
2001	TEST HOLES 1948 to 1964	shown with prefix 625-

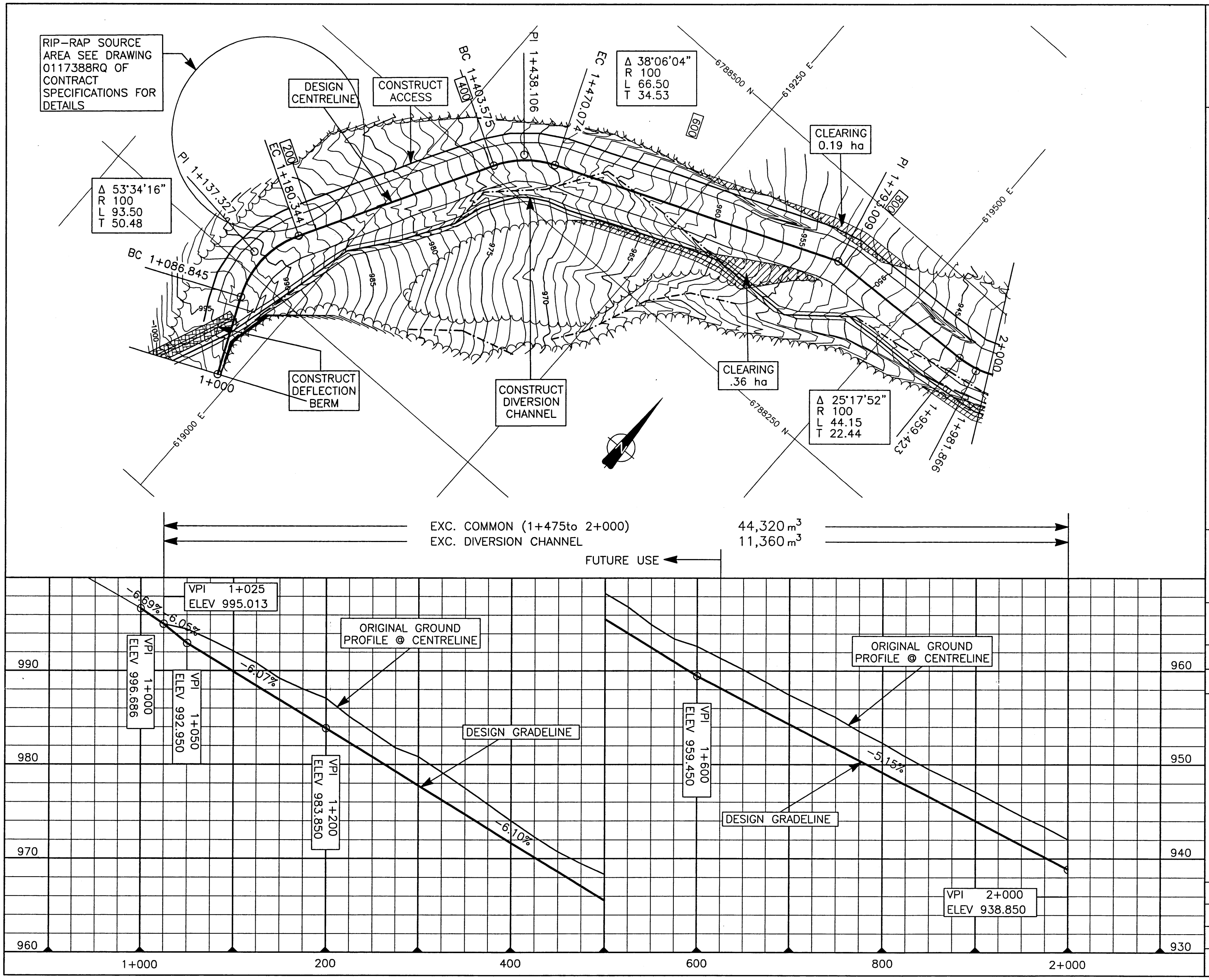
Backhoe Testing

1985	TEST PITS 108 to 112	shown with prefix 808-
1988	TEST PITS 1 to 21	shown with prefix 029-
1988	TEST PITS 22 to 39	shown with prefix 030-
2002	TEST PITS 1 to 25	shown with prefix 631-

GRANULAR SOURCE TESTING
Km 1738.8 RHS & LHS
ALASKA HIGHWAY

Km 1738.8 LHS Alaska Highway
(Bocks Brook)

2001
Test Hole Logs



Yukon
Infrastructure
Transportation Engineering Branch

NOTES:

1. CONTOUR INTERVAL 1m
2. DESIGN GRADELINE SHOWN IS BOTTOM OF CHANNEL
3. COORDINATE GRID IS NAD 83 ZONE 7
4. EXISTING CREEK CHANNELS AS OF SEPTEMBER 2001

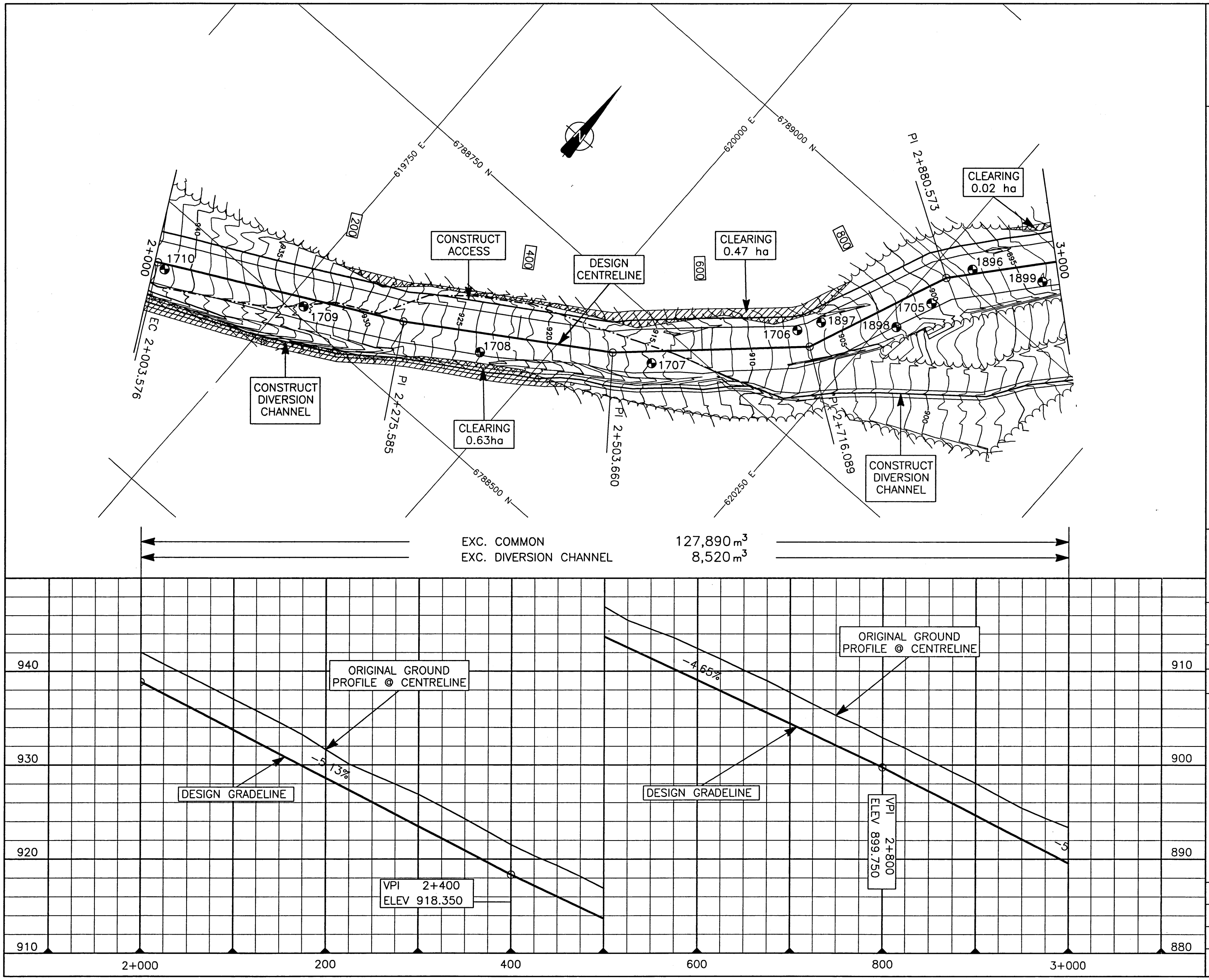
PROJECT:
HIGHWAY CONSTRUCTION
km1738.3–km1750.2
ALASKA HIGHWAY #1

DRAWING TITLE:
BOCKS BROOK 1+000–2+000

DATE: 2002-03-22
HORIZONTAL SCALE: 1:4,000
DRAWN: DT \ KLJ
VERTICAL SCALE: 1:400

DESIGN: B. STANLEY
CHECKED: P. KNYSH, P.ENG
APPROVED:

DRAWING NO.117388BP-1
SHEET 26 of 29



Yukon
Infrastructure
Transportation Engineering Branch

NOTES:

1. CONTOUR INTERVAL 1m
2. DESIGN GRADELINE SHOWN IS BOTTOM OF CHANNEL
3. COORDINATE GRID IS NAD 83 ZONE 7
4. EXISTING CREEK CHANNELS AS OF SEPTEMBER 2001

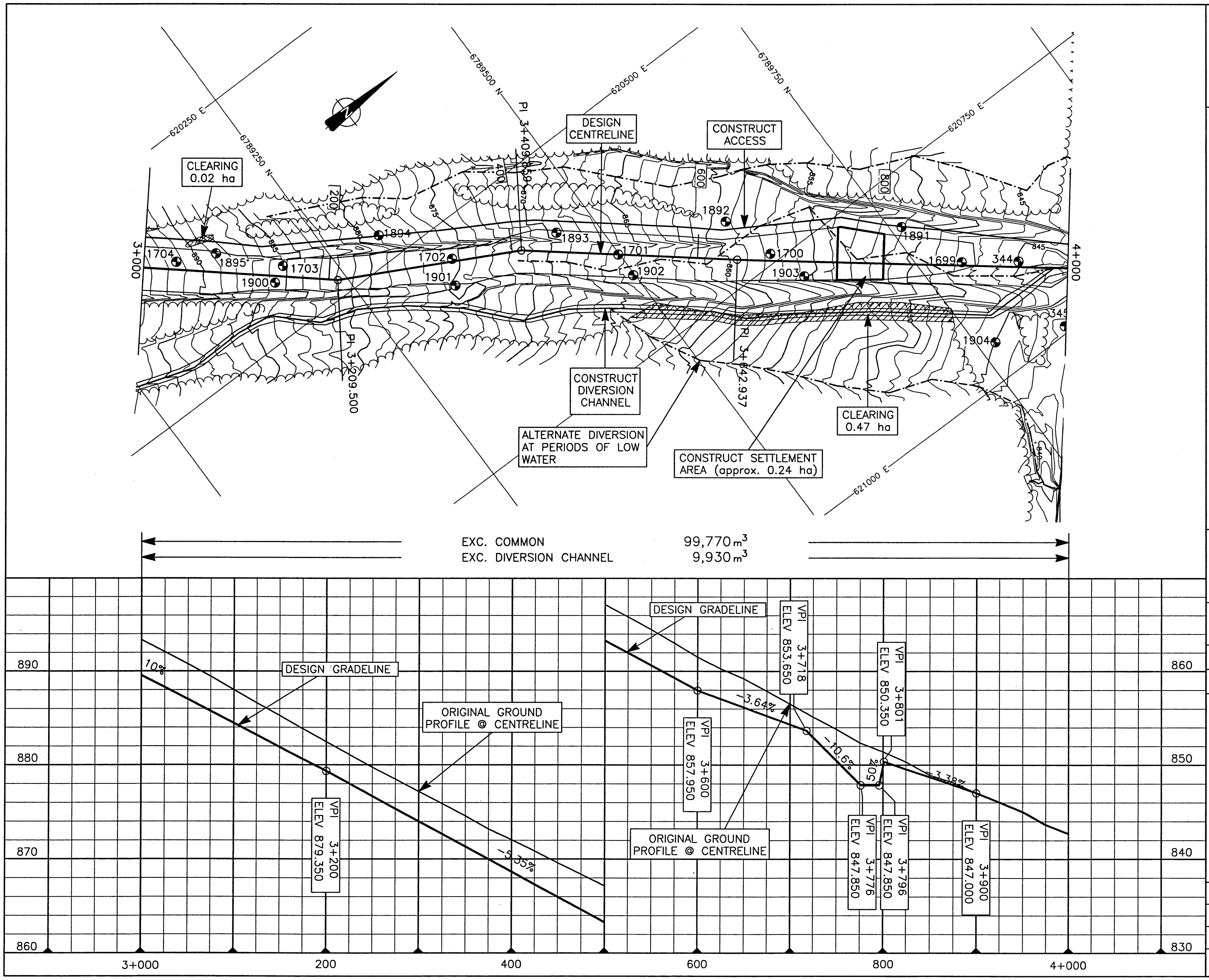
PROJECT:
HIGHWAY CONSTRUCTION
km1738.3–km1750.2
ALASKA HIGHWAY #1

DRAWING TITLE:
BOCKS BROOK 2+000–3+000

DATE: 2002-03-22
HORIZONTAL SCALE: 1:4,000
DRAWN: DT \ KLJ
VERTICAL SCALE: 1:400

DESIGN: B. STANLEY
CHECKED: P. KNYSH, P.ENG
APPROVED:

DRAWING NO. 117388BP-2
SHEET 27 of 29



Yukon
Infrastructure
Transportation Engineering Branch

NOTES:

1. CONTOUR INTERVAL 1m
2. DESIGN GRADELINE SHOWN IS BOTTOM OF CHANNEL
3. COORDINATE GRID IS NAD 83 ZONE 7
4. EXISTING CREEK CHANNELS AS OF SEPTEMBER 2001

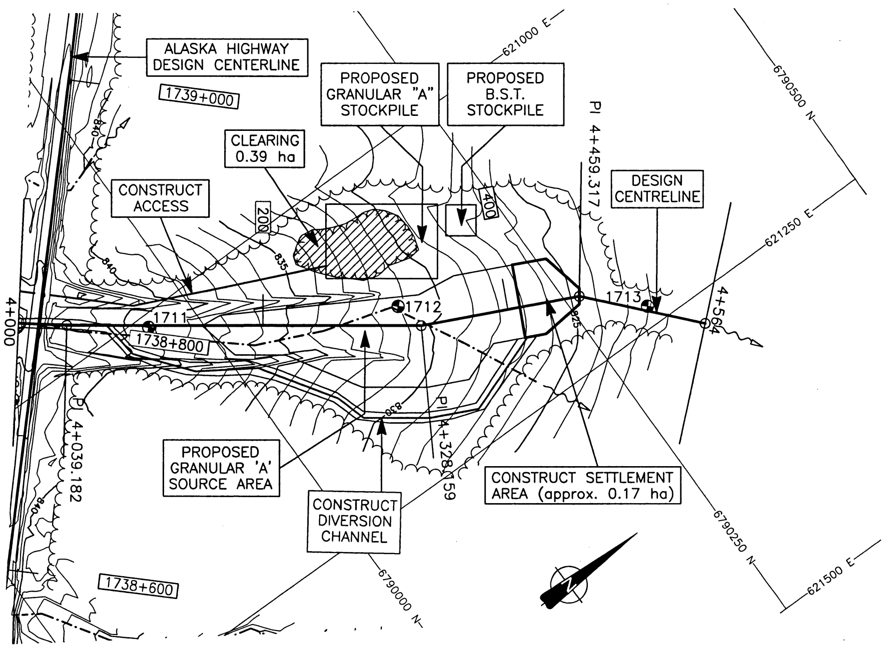
PROJECT:
HIGHWAY CONSTRUCTION
km1738.3–km1750.2
ALASKA HIGHWAY #1

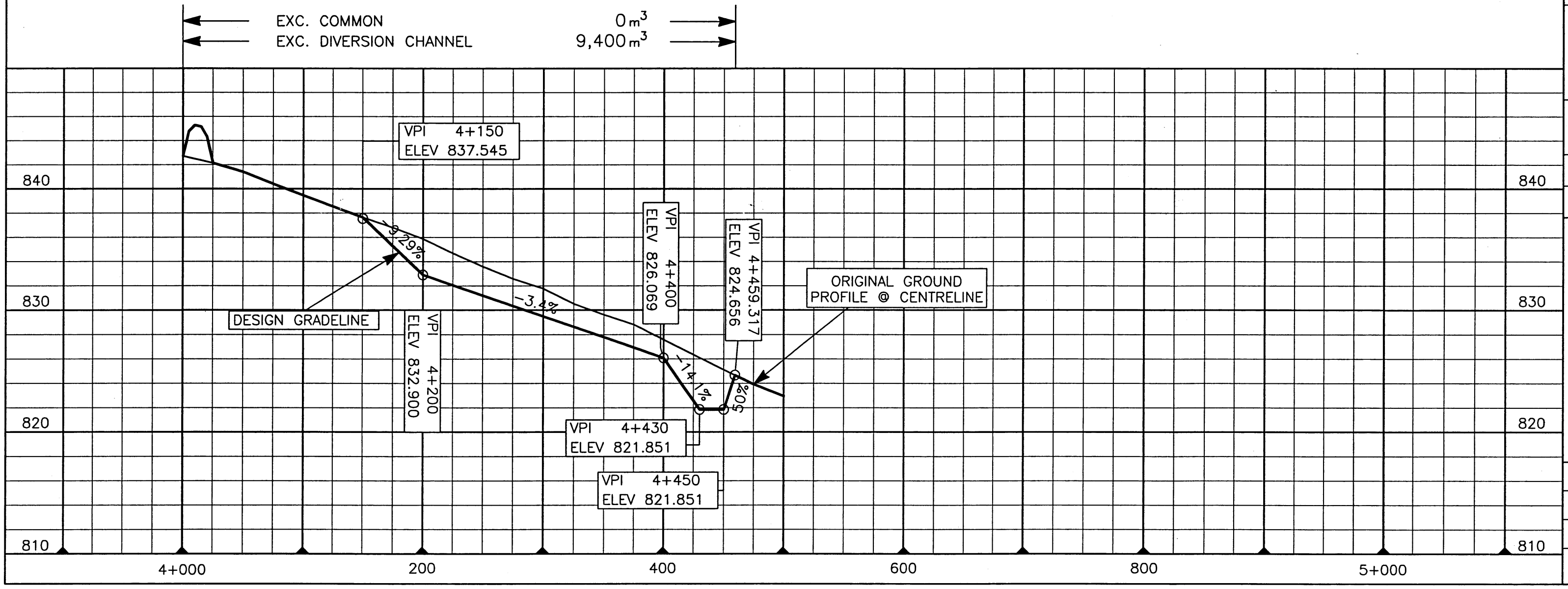
DRAWING TITLE:
BOCKS BROOK 3+000–4+000

DATE: 2002–03–22
HORIZONTAL SCALE: 1:4,000
DRAWN: DT \ KLJ
VERTICAL SCALE: 1:400

DESIGN: B. STANLEY
CHECKED: P. KNYSH, P.ENG
APPROVED:

DRAWING NO.117388BP–3
SHEET 28 of 29





Yukon
Infrastructure
Transportation Engineering Branch

NOTES:

1. CONTOUR INTERVAL 1m
2. DESIGN GRADELINE SHOWN IS BOTTOM OF CHANNEL
3. COORDINATE GRID IS NAD 83 ZONE 7
4. EXISTING CREEK CHANNELS AS OF SEPTEMBER 2001

PROJECT:
HIGHWAY CONSTRUCTION
km1738.3–km1750.2
ALASKA HIGHWAY #1

DRAWING TITLE:
BOCKS BROOK 4+000–4+564.476

DATE: 2002-03-22	HORIZONTAL SCALE: 1:4,000
DRAWN: DT \ KLJ	VERTICAL SCALE: 1:400

DESIGN: B. STANLEY
CHECKED: P. KNYSH, P.ENG
APPROVED:

DRAWING NO. 117388BP-4 SHEET 29 of 29

SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST PIT NO: 612-344
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1734+661 BK; 1738+799 AH 69m LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0 ▼	POORLY GRADED GRAVEL WITH SAND (GP) -brown -water level @ .2m -saturated to free water -easy grindy drilling -no large rocks encountered							0.0 ▼
1.0								1.0
		☒	600	▲●	GP	▲▲	◆■	
2.0								2.0
3.0								3.0
4.0								4.0
	END HOLE @ 4.5m Note: Testhole in Bock's Creek Bed							
5.0								5.0
6.0								6.0

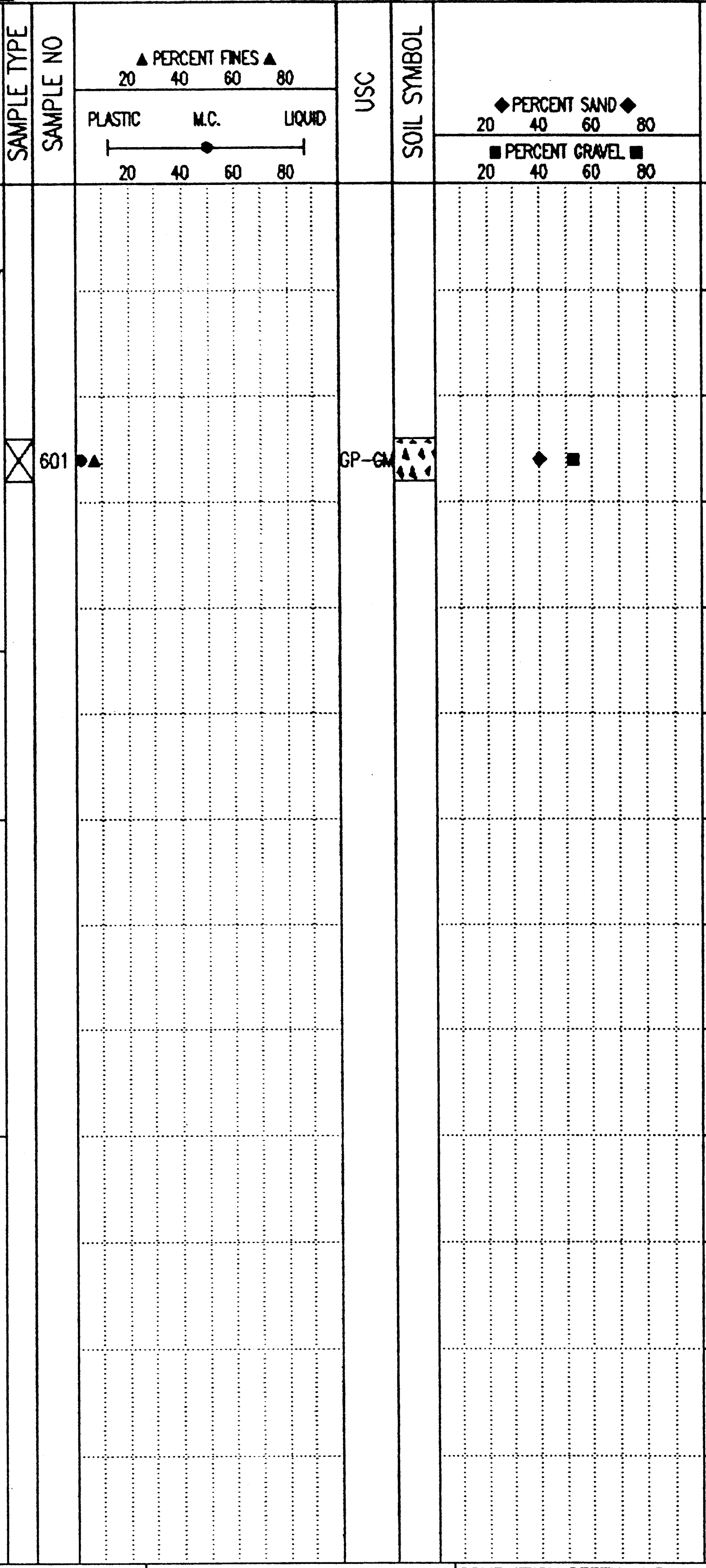
Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/08/06
	Fig. No:	Page 1 of 1

02/03/21 03:20PM

SUBSURFACE EXPLORATION & TESTING REPORT	SEG 11	TEST PIT NO: 612-345
ENGINEERING CAPITAL	ROW TESTING A/H	Project No: 092-202101-0361
B40-L DRILL 6"AUGERS	LOCATION:1734+598 BK; 1738+736 AH 14m LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▯ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	GRAVELLY SAND -brown -moist
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -grey -damp -grindy drilling
1.0	
2.0	SILT AND ORGANIC -brown - black -saturated -smooth drilling
3.0▼	GRANULAR MATERIAL SUSPECTED -sample washed off auger -H20 level @ 3.0m -some grindy drilling
4.0	
	END HOLE @ 4.5m
5.0	
6.0	

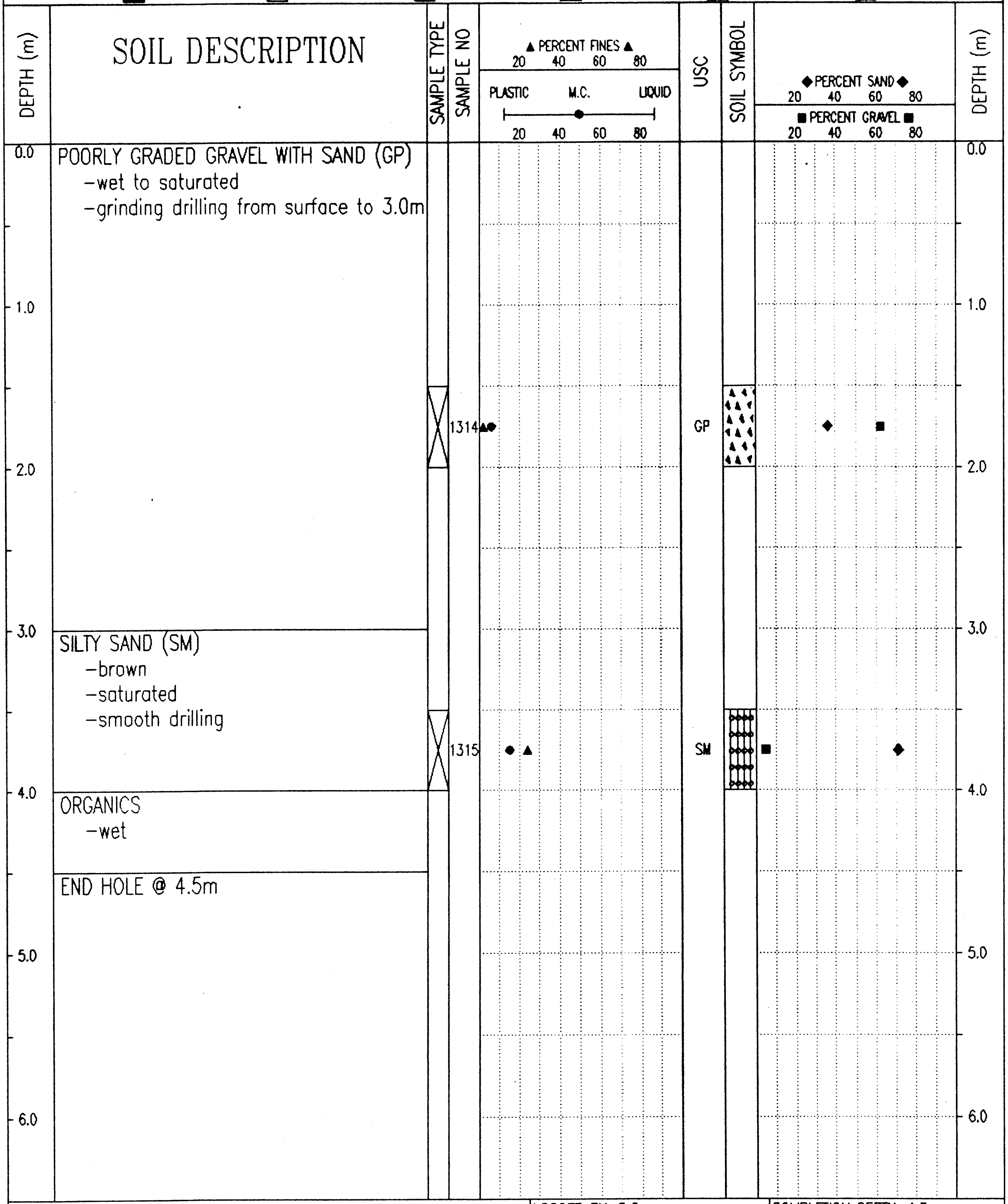


Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/08/06
	Fig. No:	Page 1 of 1

02/03/21 03:20PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 622-1891
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION:SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▯ CORE



POORLY GRADED GRAVEL WITH SAND (GP)
- wet to saturated
- grinding drilling from surface to 3.0m

SILTY SAND (SM)
- brown
- saturated
- smooth drilling

ORGANICS
- wet

END HOLE @ 4.5m

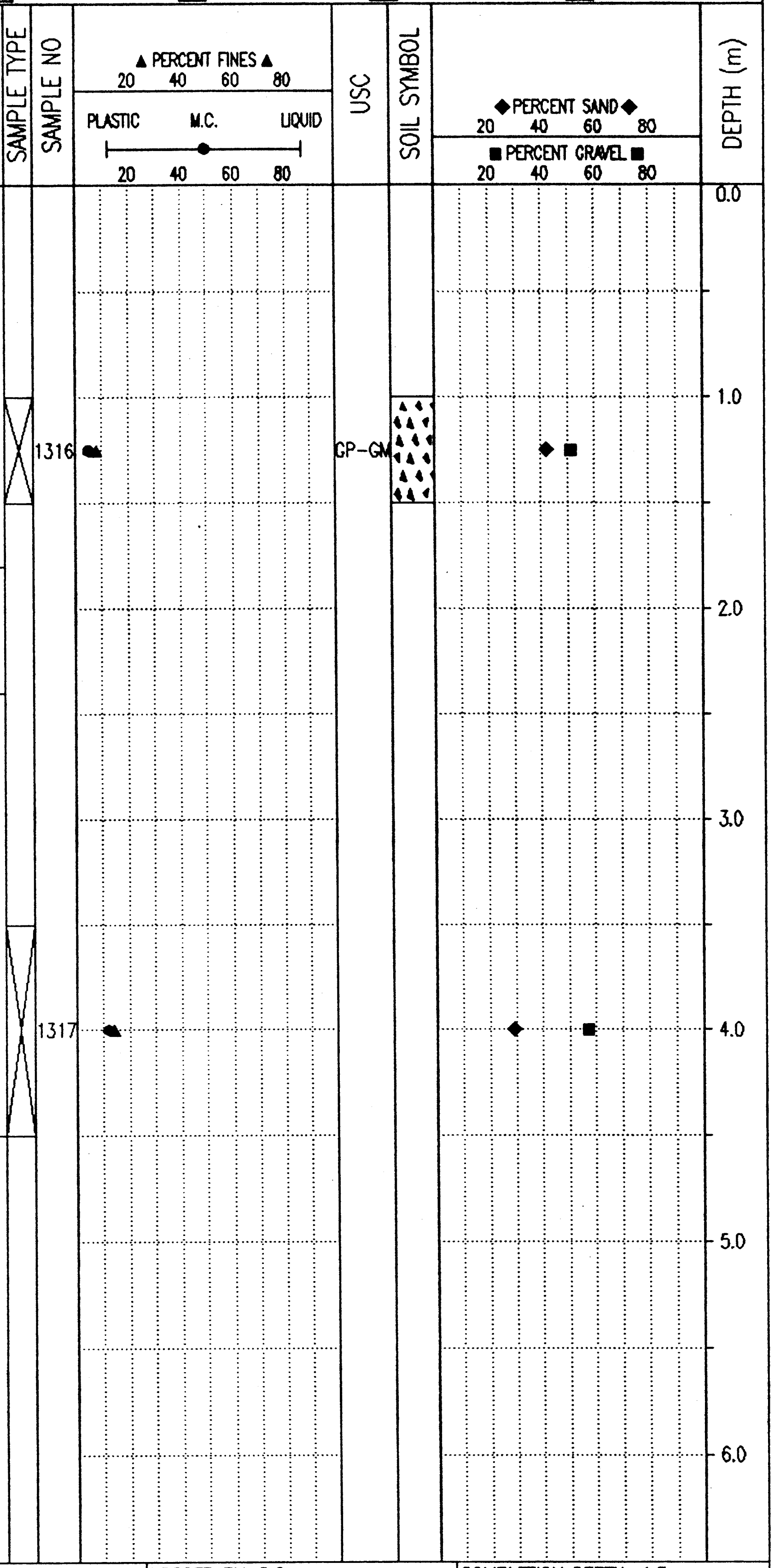
Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/09/18
	Fig. No:	Page 1 of 1

02/01/30 01:40PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 622–1892
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092–202101–0361
MOBILE B40L 6" AUGER	LOCATION:SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP–GM) –grey – brown –wet –grinding drilling from surface to 1.8m
1.8	SILTY SAND WITH ORGANICS –wet –smooth drilling
2.4	SILT WITH ORGANICS, SAND, & GRAVEL –wet – saturated –smooth drilling –sample 1317 tested (GM) but probably contaminated by material from above
4.5	END HOLE @ 4.5m

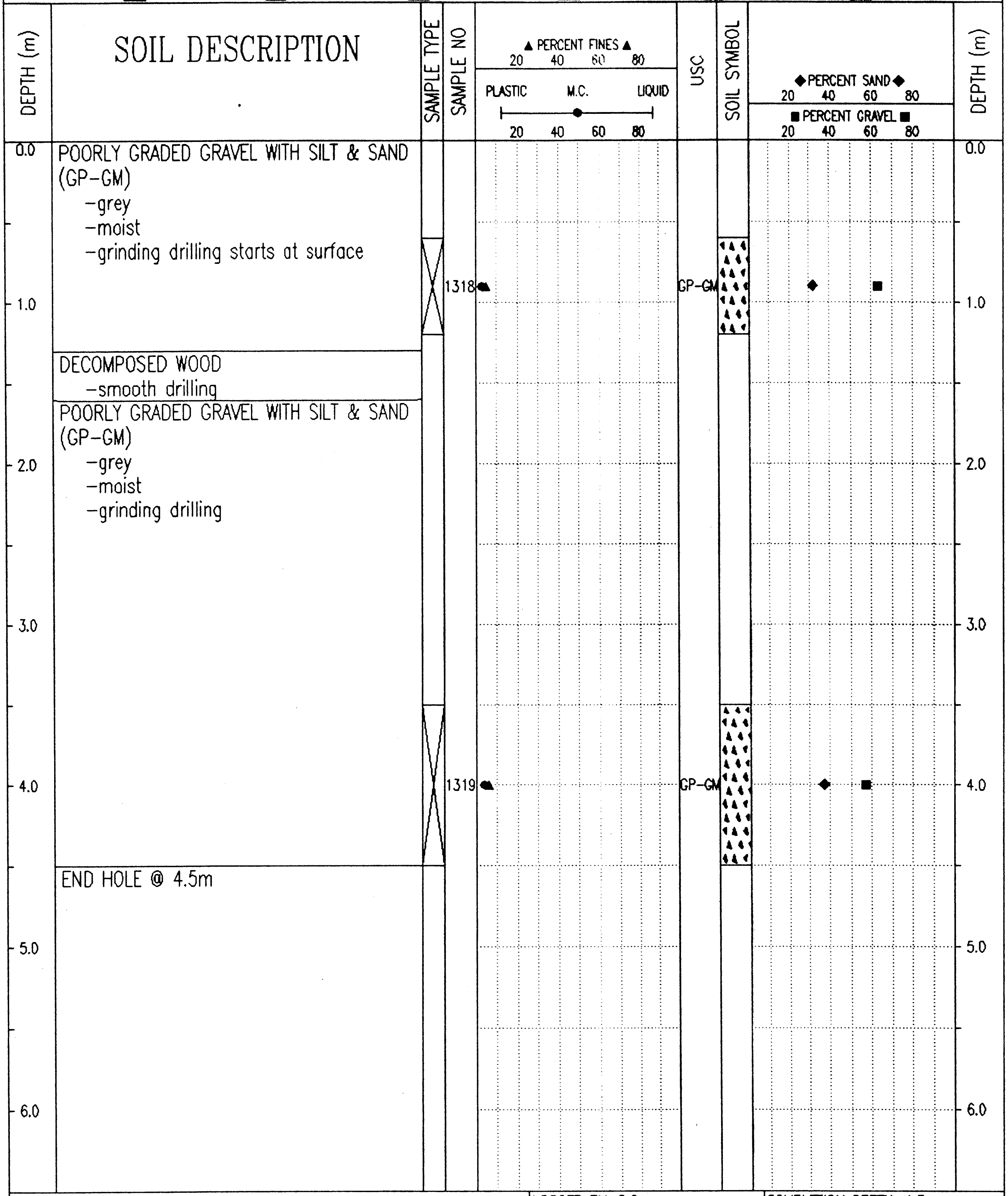


Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/09/18
	Fig. No:	Page 1 of 1

02/02/21 02:53PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 622-1893
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION:SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ▤ BULK ▯ TUBE ▮ CORE



POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)
- grey
- moist
- grinding drilling starts at surface

DECOMPOSED WOOD
- smooth drilling

POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)
- grey
- moist
- grinding drilling

END HOLE @ 4.5m

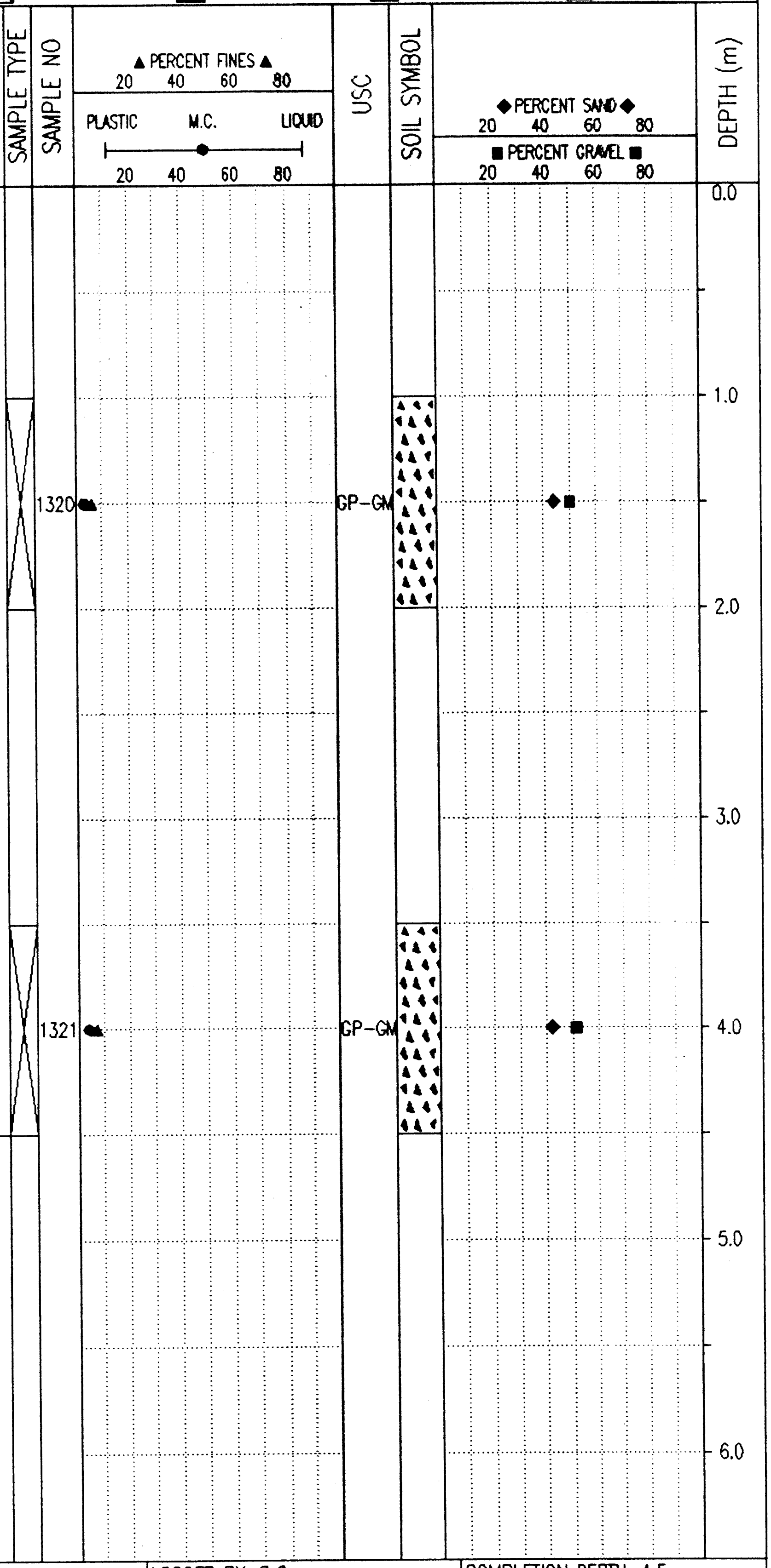
Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/09/18
	Fig. No:	Page 1 of 1

02/01/30 01:53PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 622-1894
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION:SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -grey -damp - moist -grinding - rough drilling from surface
3.0	-brown - grey below 3.0 -moist below 3.0m -smoother drilling below 3.0m -smaller gravels below 3.0m
4.5	END HOLE @ 4.5m

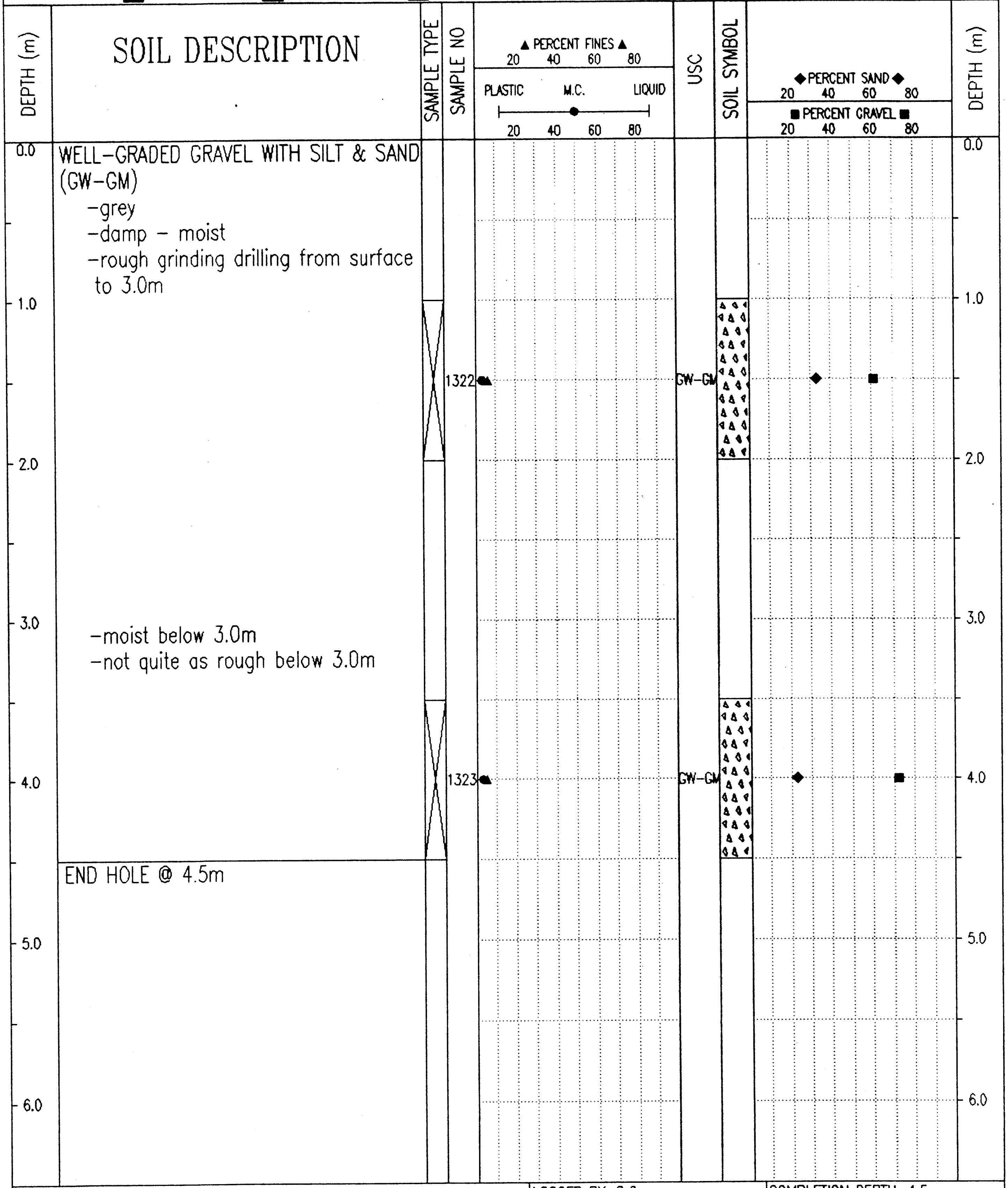


Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/09/18
	Fig. No:	Page 1 of 1

02/01/30 01:40PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 622-1895
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SOIL DESCRIPTION

WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)

- -grey
- -damp - moist
- -rough grinding drilling from surface to 3.0m
- -moist below 3.0m
- -not quite as rough below 3.0m

END HOLE @ 4.5m

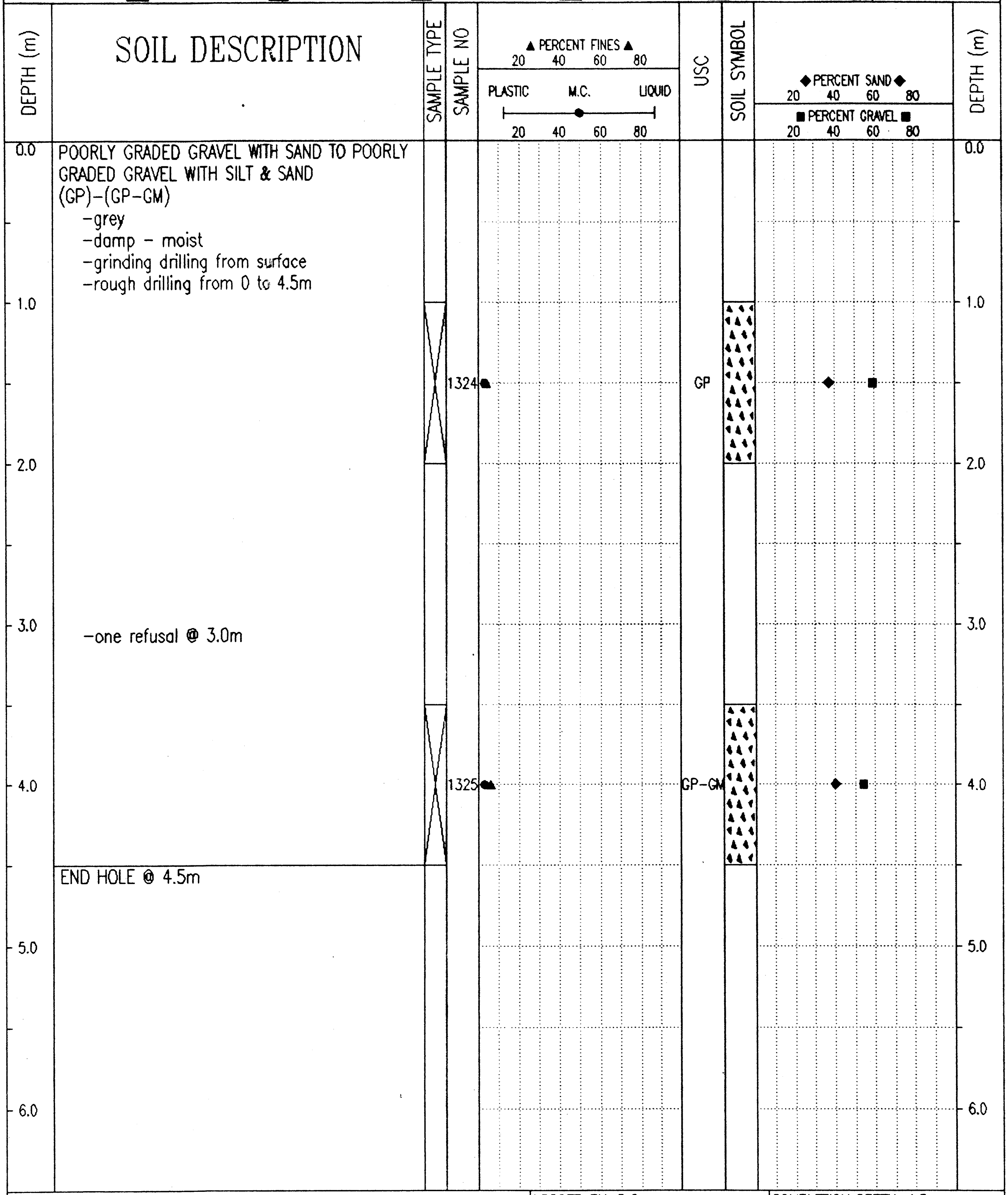
Government of Yukon
Transportation Engineering

LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 01/09/18
Fig. No:	Page 1 of 1

02/01/30 01:40PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 622-1896
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



POORLY GRADED GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GP)-(GP-GM)

- -grey
- -damp - moist
- -grinding drilling from surface
- -rough drilling from 0 to 4.5m
- -one refusal @ 3.0m

END HOLE @ 4.5m

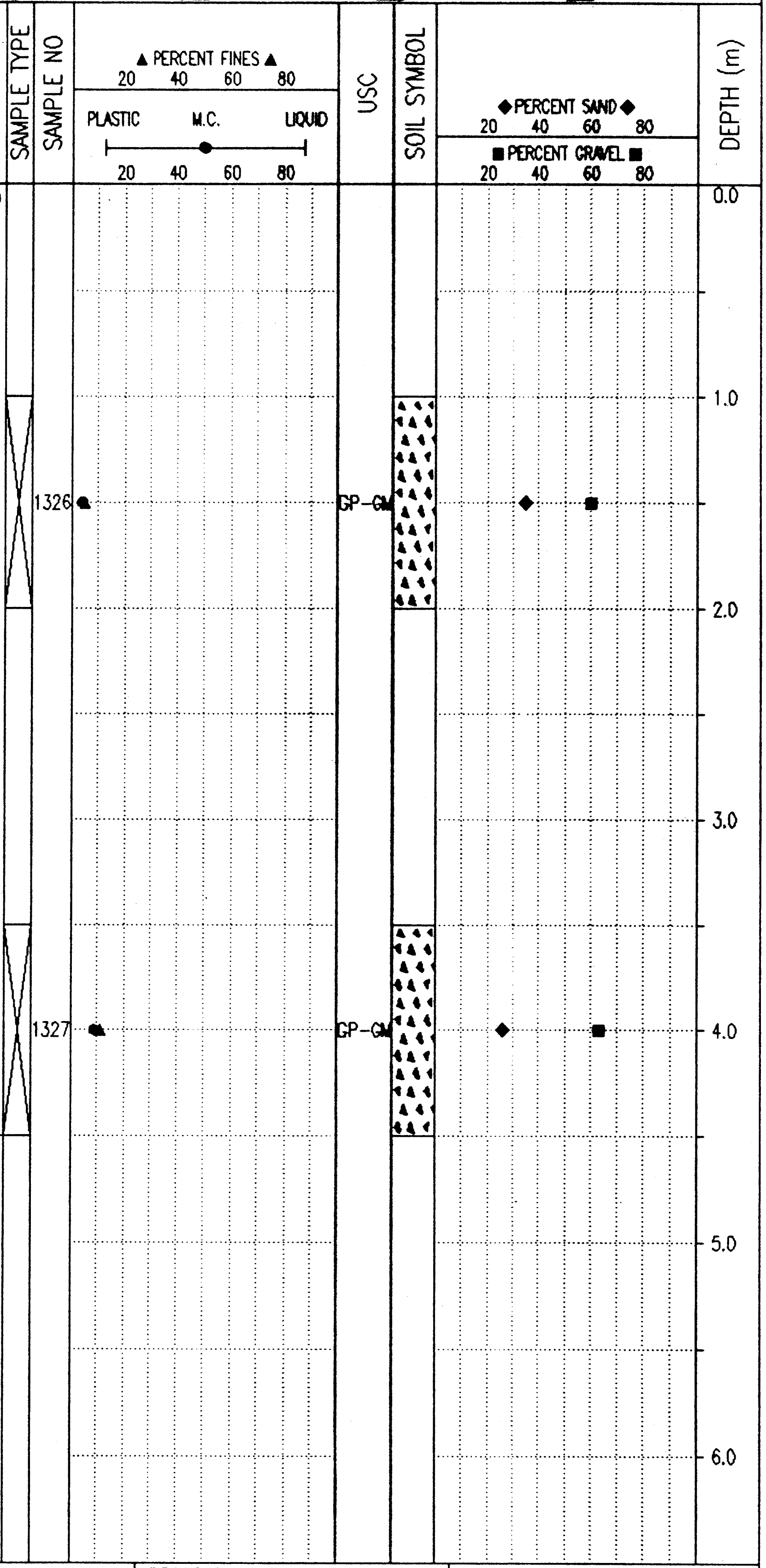
Government of Yukon	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
Transportation Engineering	REVIEWED BY:	COMPLETE: 01/09/18
	Fig. No:	Page 1 of 1

02/01/30 01:40PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 622-1897
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▯ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -grey -moist -grinding drilling from surface to 3.5m -rough drilling
1.0	
2.0	
3.0	-with organics below 3.5m -moist to wet below 3.5m -smoother drilling below 3.5m
4.0	END HOLE @ 4.5m Note: water presently running 100m lt of testhole #1897 (wider fan) -fan continues 500m
5.0	
6.0	

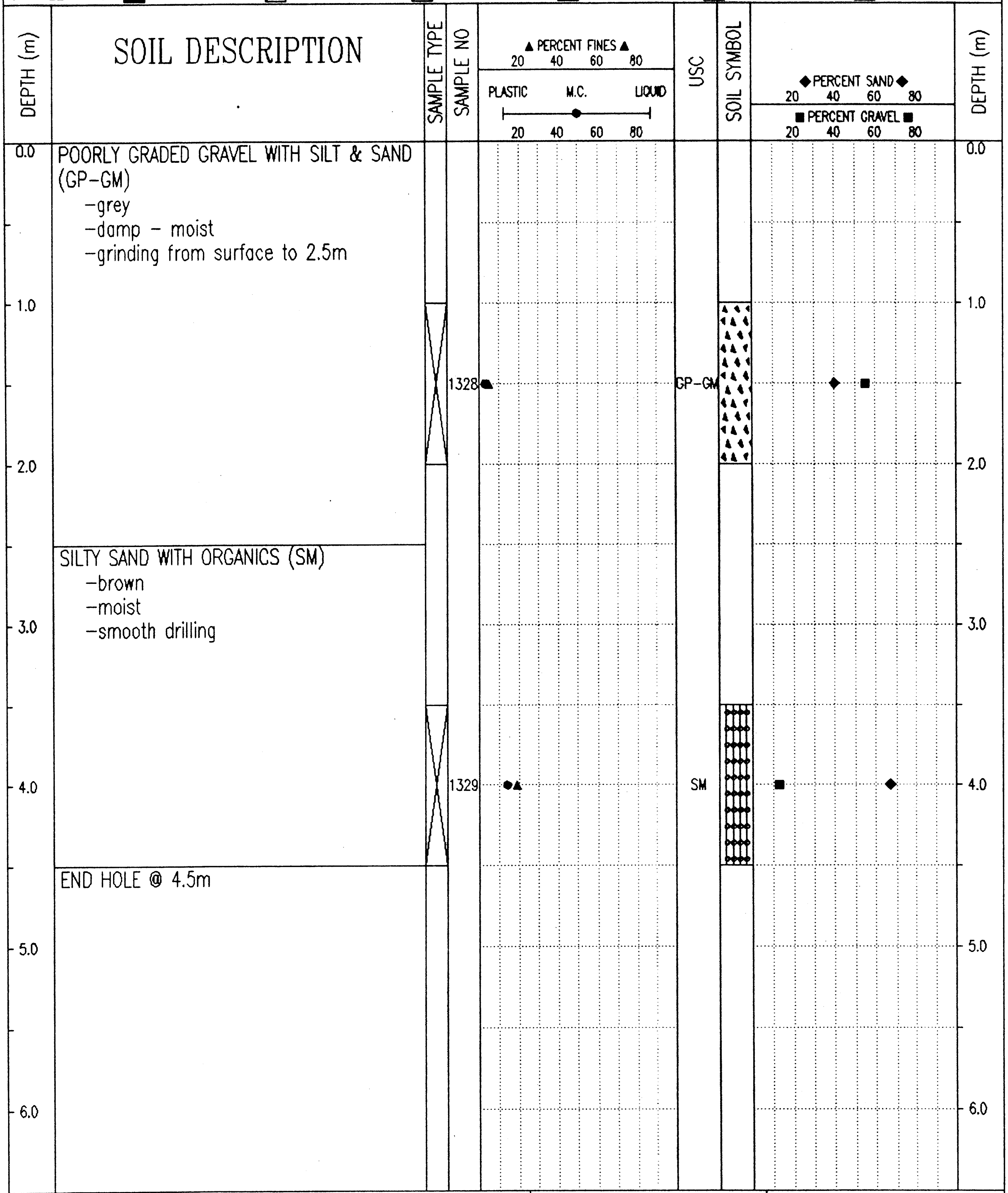


Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/09/18
	Fig. No:	Page 1 of 1

02/01/30 01:53PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 622-1898
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▯ CORE



SOIL DESCRIPTION

POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)
- grey
- damp – moist
- grinding from surface to 2.5m

SILTY SAND WITH ORGANICS (SM)
- brown
- moist
- smooth drilling

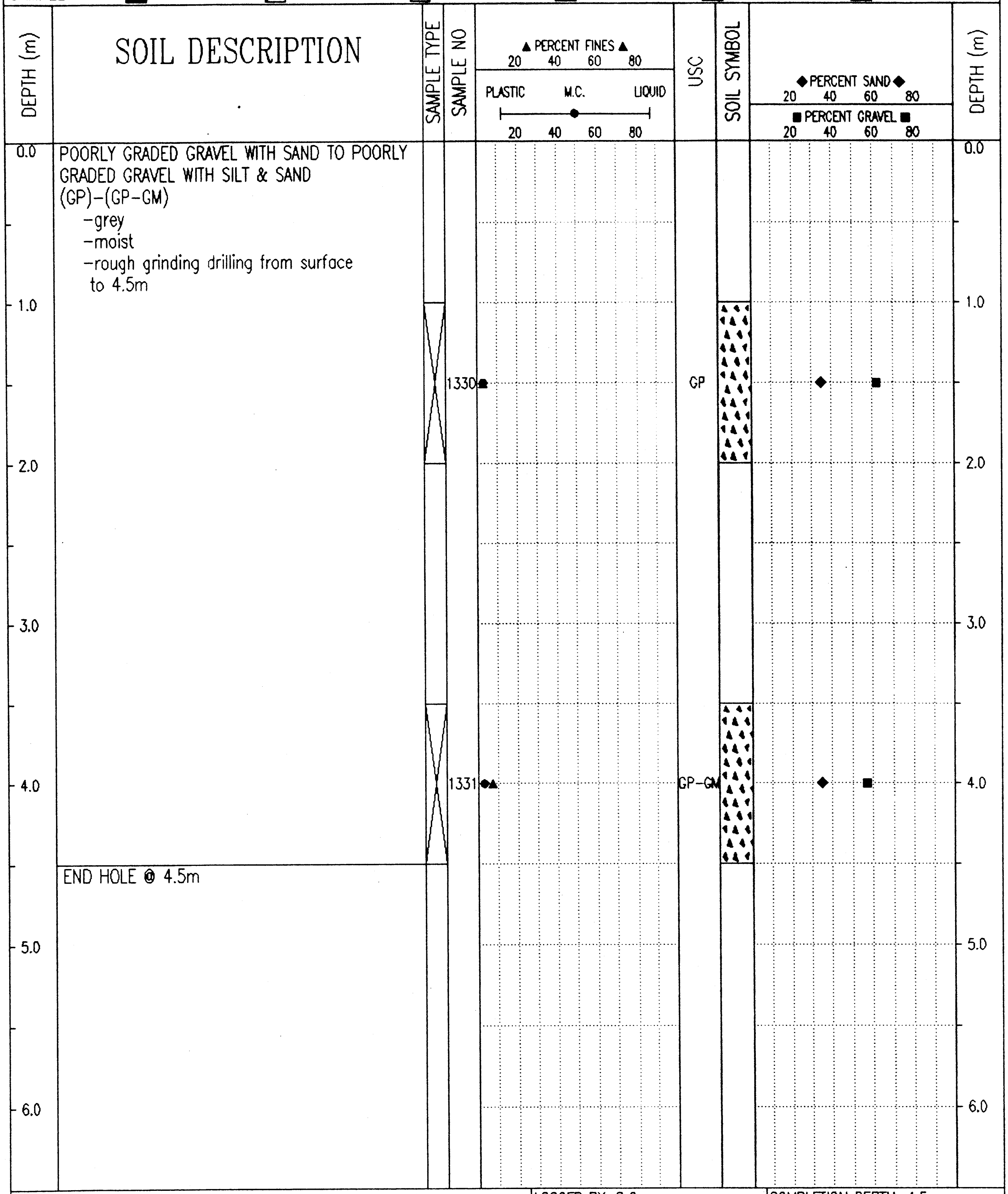
END HOLE @ 4.5m

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/09/18
	Fig. No:	Page 1 of 1

02/01/30 01:40PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 622-1899
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▯ CORE



POORLY GRADED GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GP)-(GP-GM)

- -grey
- -moist
- -rough grinding drilling from surface to 4.5m

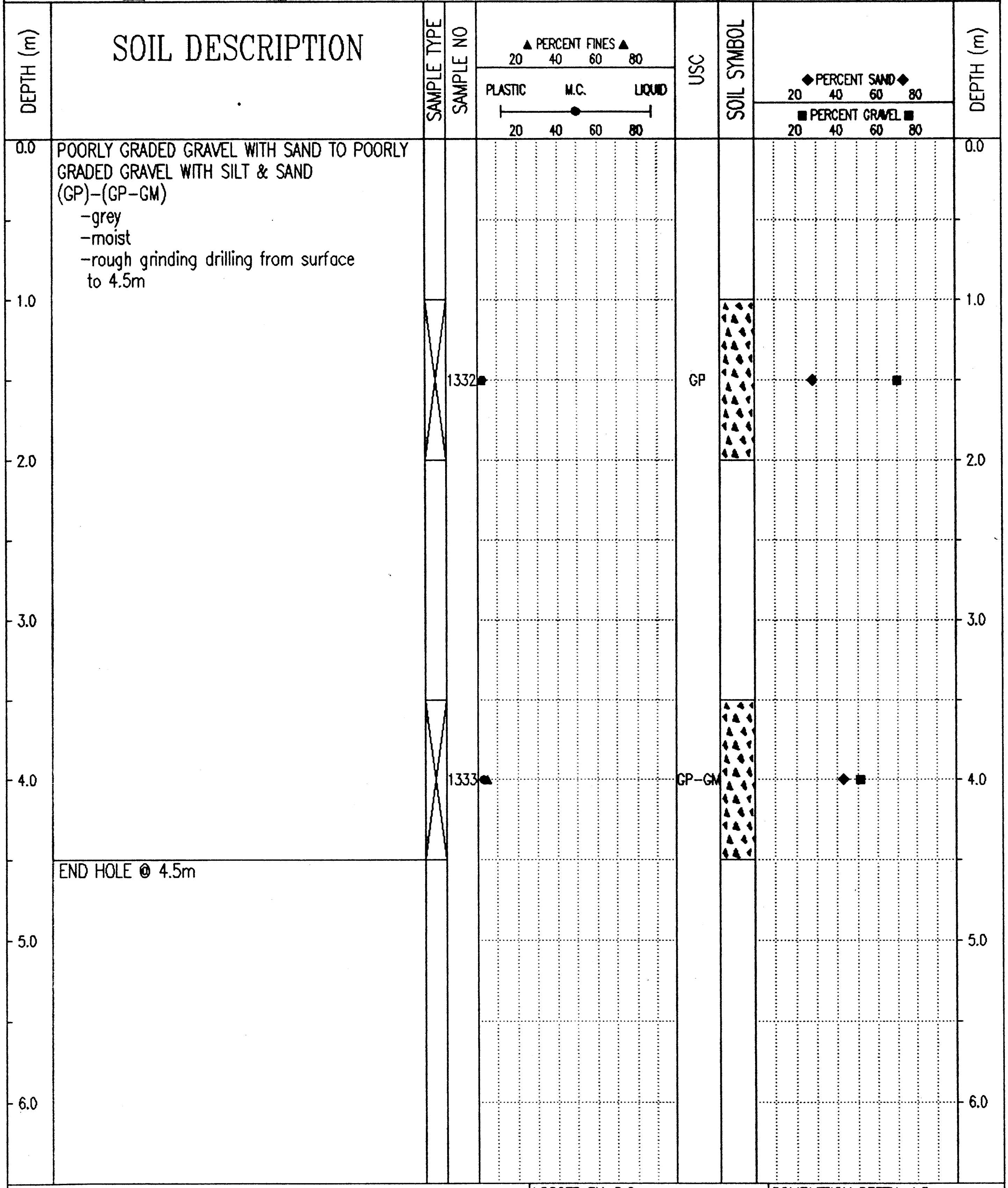
END HOLE @ 4.5m

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/09/18
	Fig. No:	Page 1 of 1

02/01/30 01:40PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 622-1900
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▯ CORE



POORLY GRADED GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GP)-(GP-GM)
- -grey
- -moist
- -rough grinding drilling from surface to 4.5m

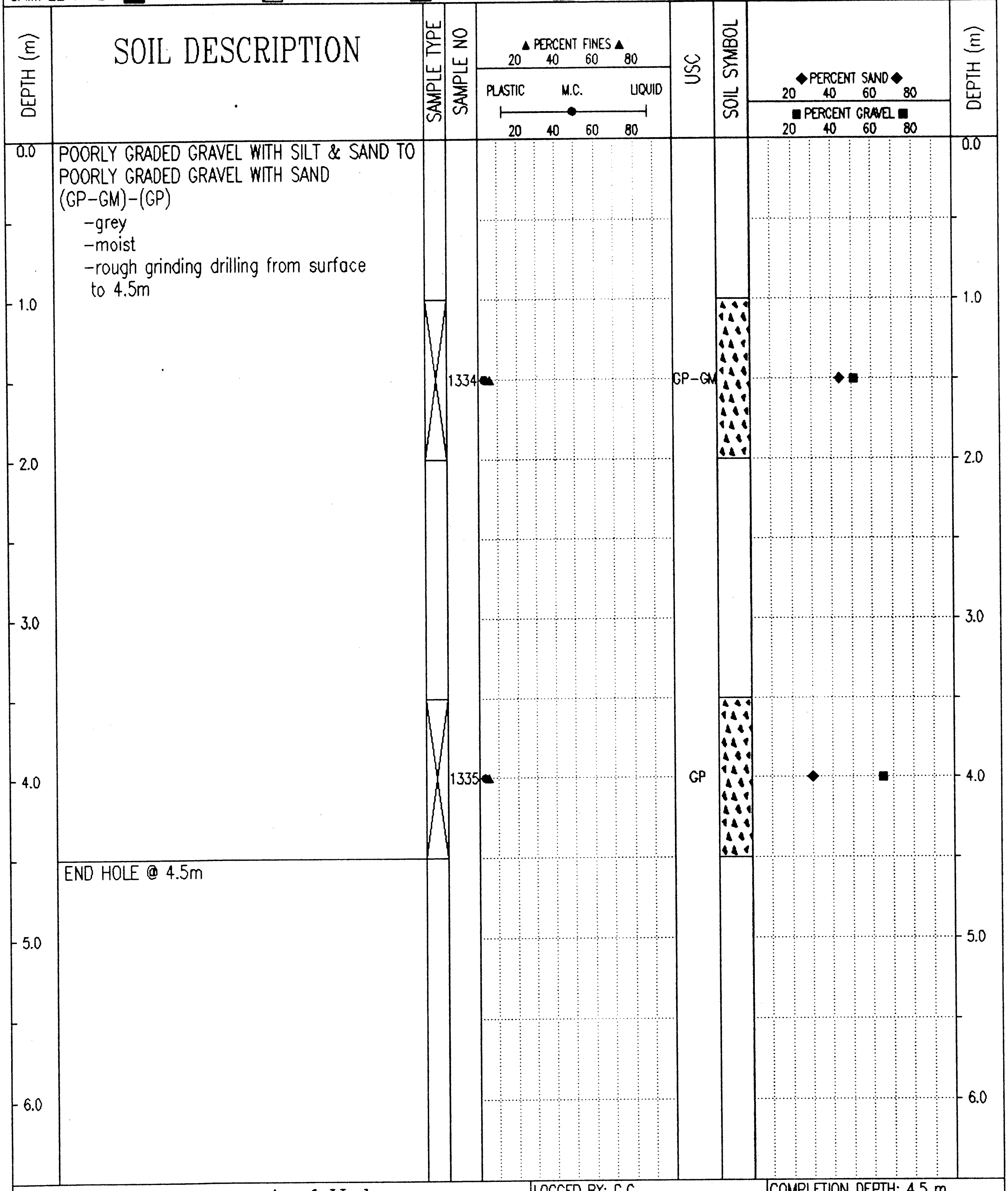
END HOLE @ 4.5m

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/09/18
	Fig. No:	Page 1 of 1

02/02/21 14:11PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 622-1901
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



POORLY GRADED GRAVEL WITH SILT & SAND TO POORLY GRADED GRAVEL WITH SAND (GP-GM)-(GP)
- -grey
- -moist
- -rough grinding drilling from surface to 4.5m

END HOLE @ 4.5m

Government of Yukon
Transportation Engineering

LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 01/09/18
Fig. No:	Page 1 of 1

02/01/30 01:56PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 622-1902
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▯ CORE

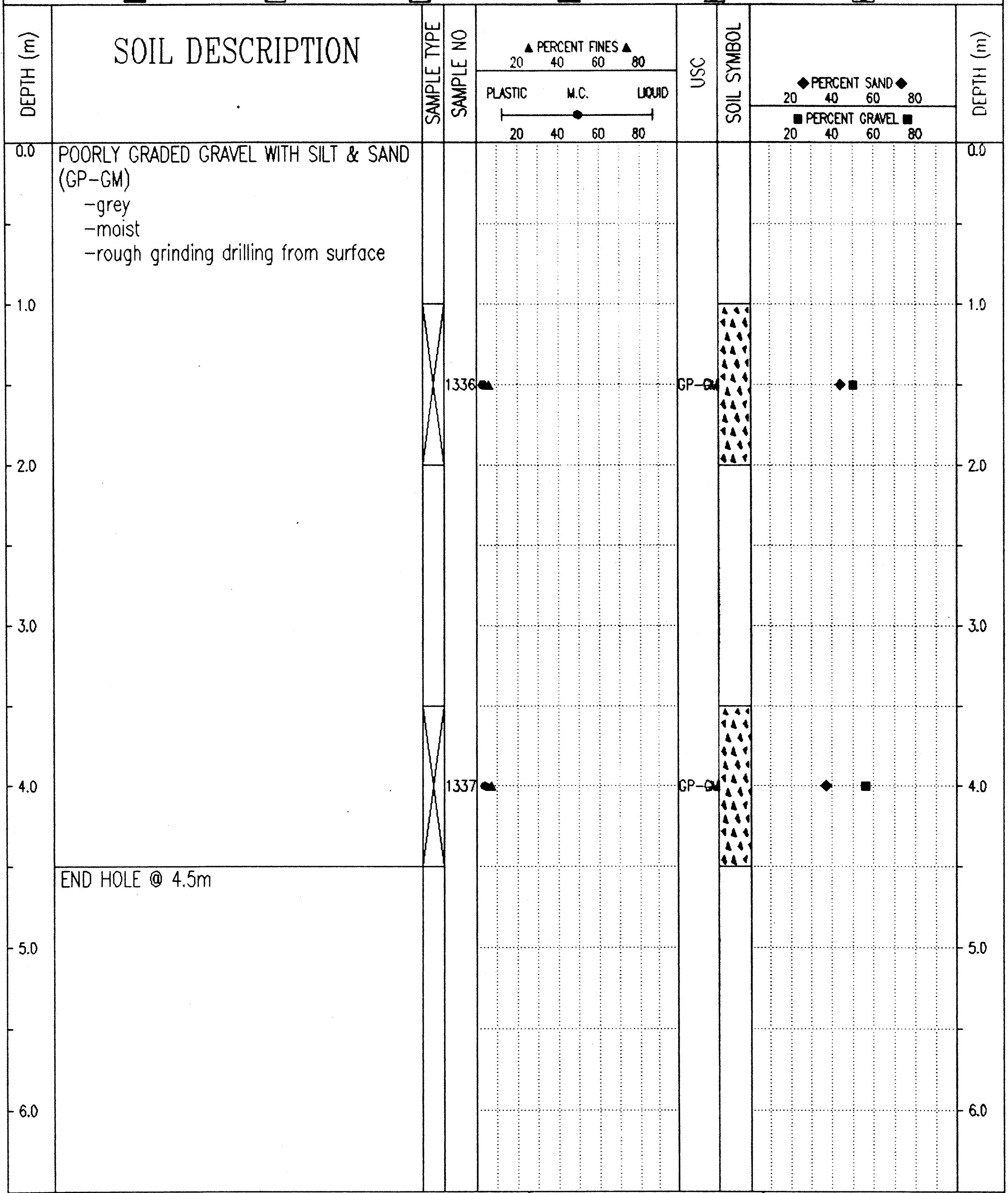
DEPTH (m)

SOIL DESCRIPTION

0.0 POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)

- -grey
- -moist
- -rough grinding drilling from surface

4.5 END HOLE @ 4.5m

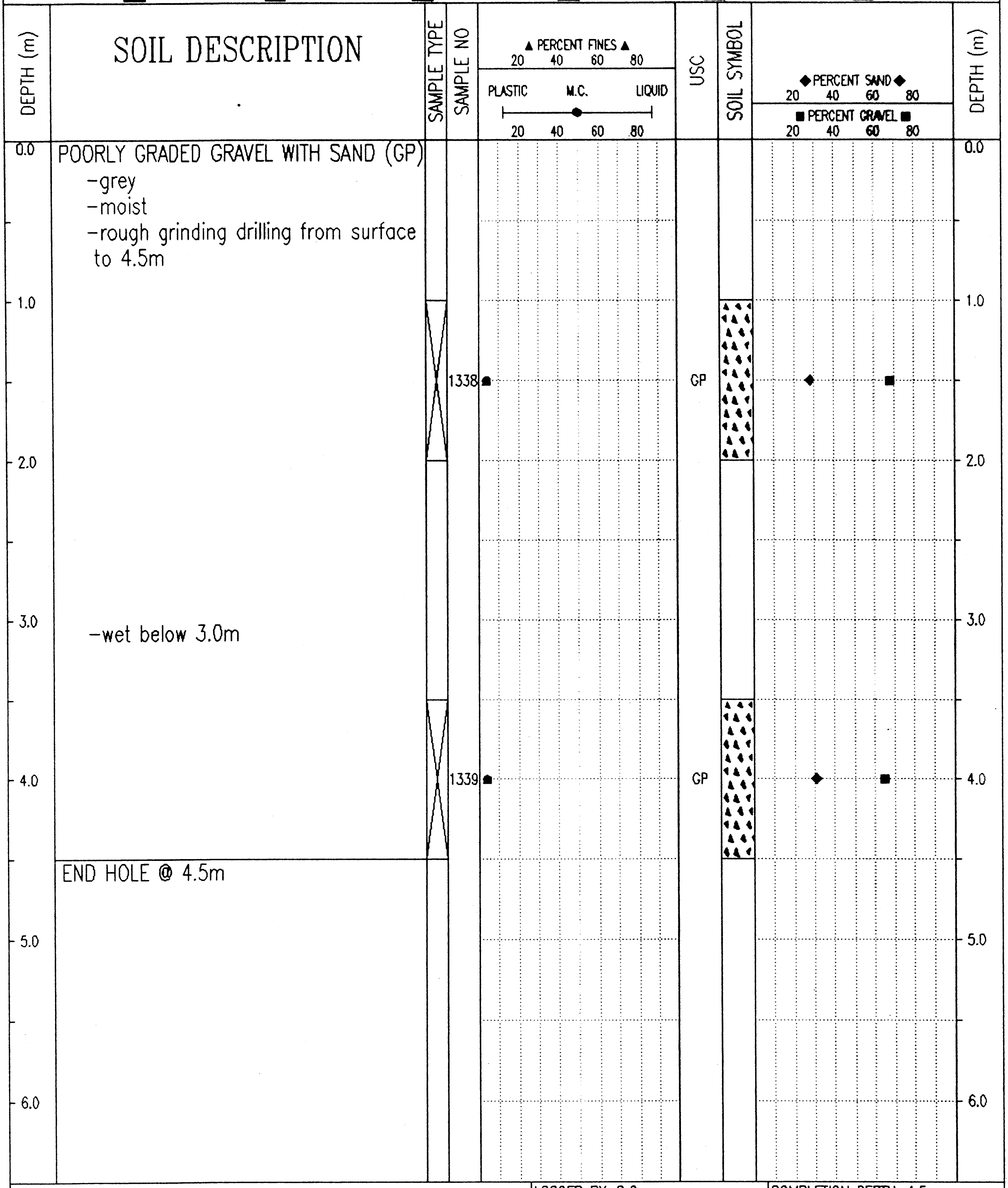


Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/09/18
	Fig. No:	Page 1 of 1

02/01/30 01:53PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 622-1903
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ◨ CORE



POORLY GRADED GRAVEL WITH SAND (GP)
- grey
- moist
- rough grinding drilling from surface to 4.5m

- wet below 3.0m

END HOLE @ 4.5m

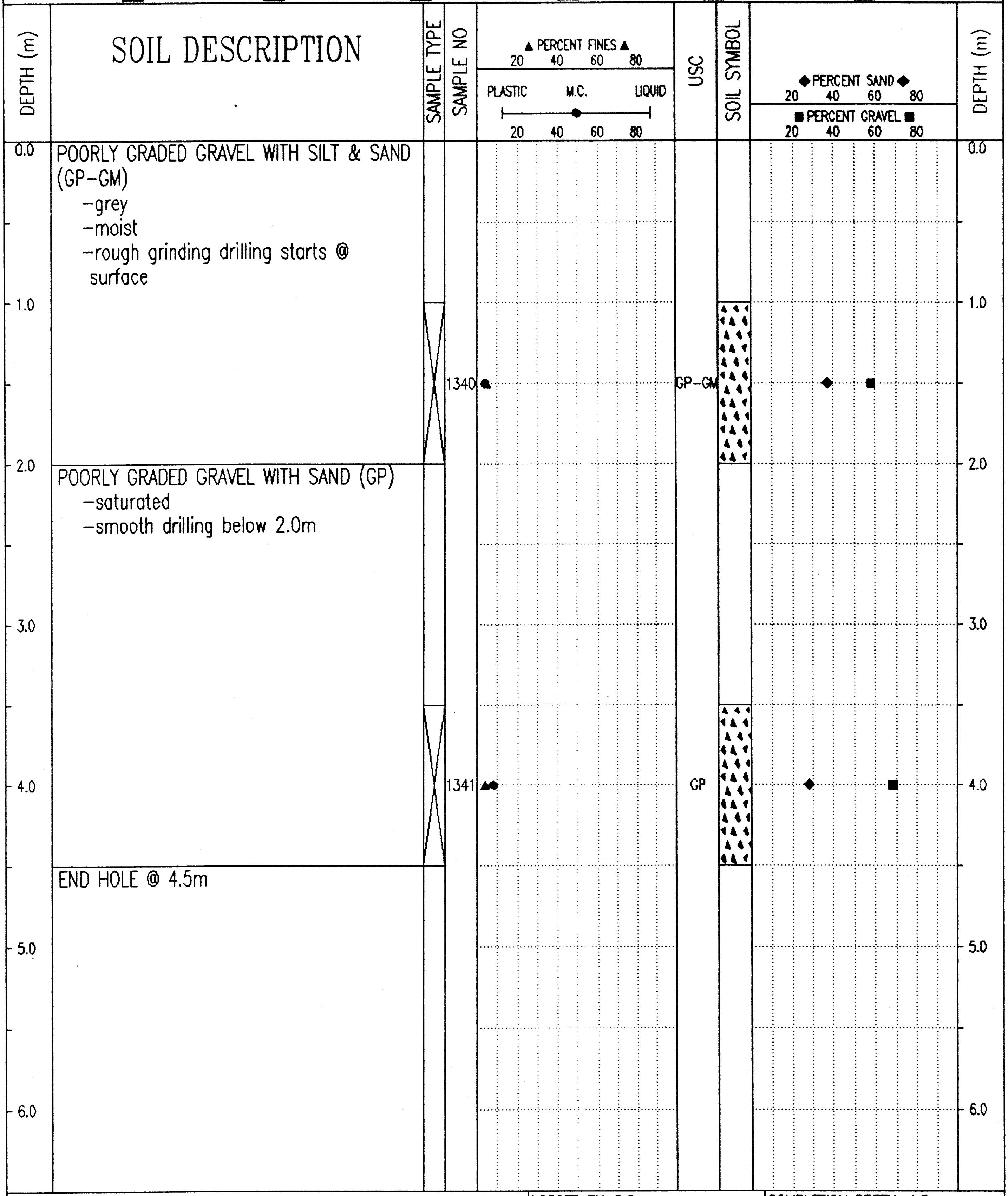
Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/09/18
	Fig. No:	Page 1 of 1

02/01/30 01:40PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 622-1904
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -grey -moist -rough grinding drilling starts @ surface
2.0	POORLY GRADED GRAVEL WITH SAND (GP) -saturated -smooth drilling below 2.0m
4.5	END HOLE @ 4.5m



Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/09/19
	Fig. No:	Page 1 of 1

02/01/30 01:40PM

Km 1738.8 LHS Alaska Highway
(Bocks Brook)

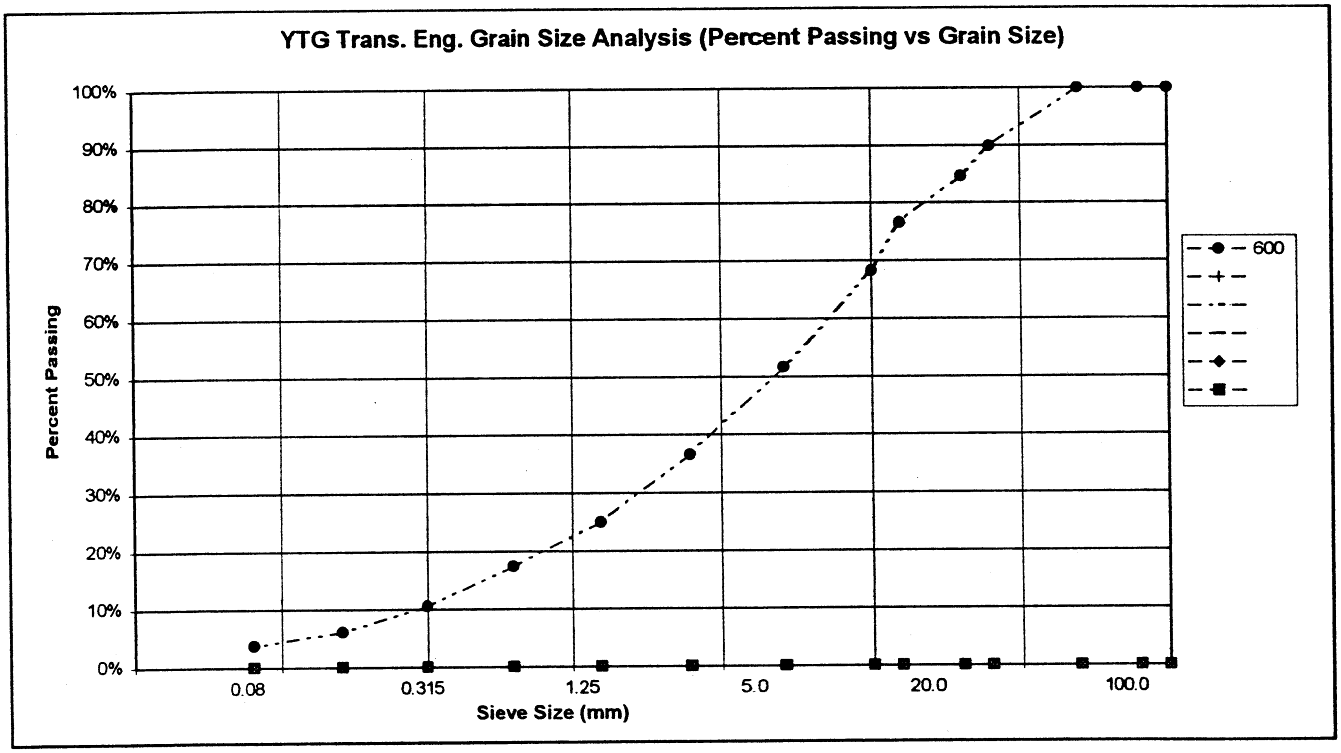
2001
Sample Test Results

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1734+666 BK; 1738+804 AH 82m LT
LOGGED BY: B.B.

HOLE No.: 612-344

DATE COMP: 2001/08/03

FIELD NO:	600					
LAB NO:	1347					
DEPTH:	1.3-1.5					
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING					
100.0	100%					
80.0	100%					
50.0	100%					
25.0	90%					
20.0	85%					
12.5	77%					
10.0	68%					
5.0	52%					
2.5	37%					
1.25	25%					
0.630	17%					
0.315	11%					
0.160	6%					
0.080	4%					
M.C.(%):	7%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	48					
% SAND:	48					
% FINES:	4					
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)					

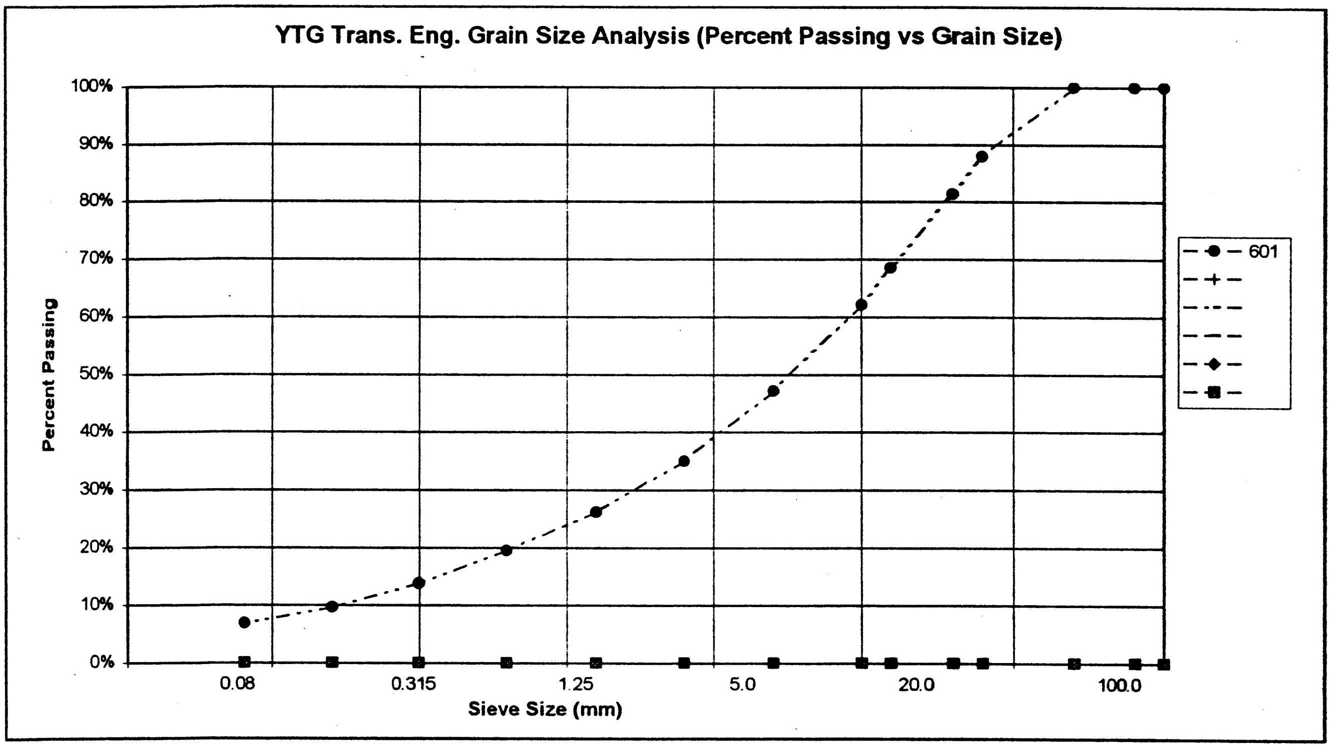

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Km 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1734+603 BK; 1738+741 AH 21m LT
LOGGED BY: B.B.

HOLE No.: 612-345

DATE COMP: 2001/08/03

FIELD NO:	601					
LAB NO:	1348					
DEPTH:	1.2-1.4					
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING					
100.0	100%					
80.0	100%					
50.0	100%					
25.0	88%					
20.0	81%					
12.5	69%					
10.0	62%					
5.0	47%					
2.5	35%					
1.25	26%					
0.630	20%					
0.315	14%					
0.160	10%					
0.080	7%					
M.C.(%):	2%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	53					
% SAND:	40					
% FINES:	7					
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)					



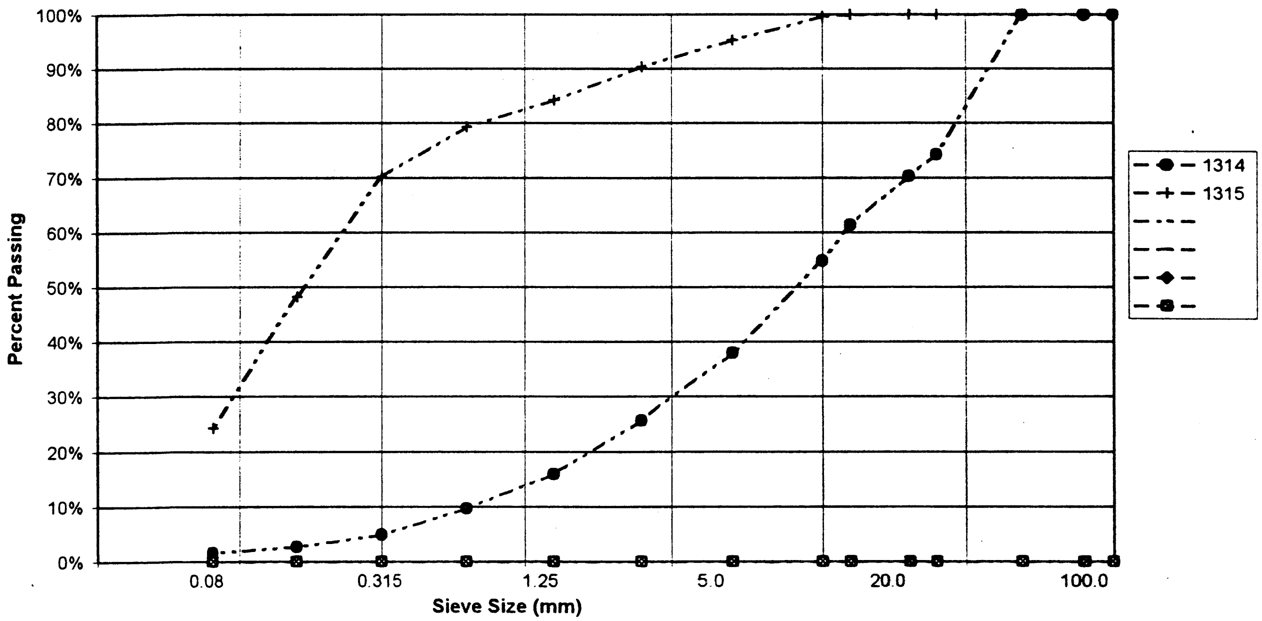
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Bock's Brook
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 622-1891

DATE COMP: 2001/09/17

FIELD NO:	1314	1315				
LAB NO:	2091	2092				
DEPTH:	1.5-2.0	3.5-4.0				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	74%	100%				
20.0	70%	100%				
12.5	61%	100%				
10.0	55%	100%				
5.0	38%	95%				
2.5	26%	90%				
1.25	16%	84%				
0.630	10%	79%				
0.315	5%	70%				
0.160	3%	48%				
0.080	2%	24%				
M.C.(%):	6%	15%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	62	5				
% SAND:	36	71				
% FINES:	2	24				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY SAND (SM)				

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0361-1

HOLE No.: 622-1892

CLIENT: ENGINEERING CAPITAL

PROJECT NAME: SHAKWAK SEG 11

PROJECT LOCATION: Bock's Brook

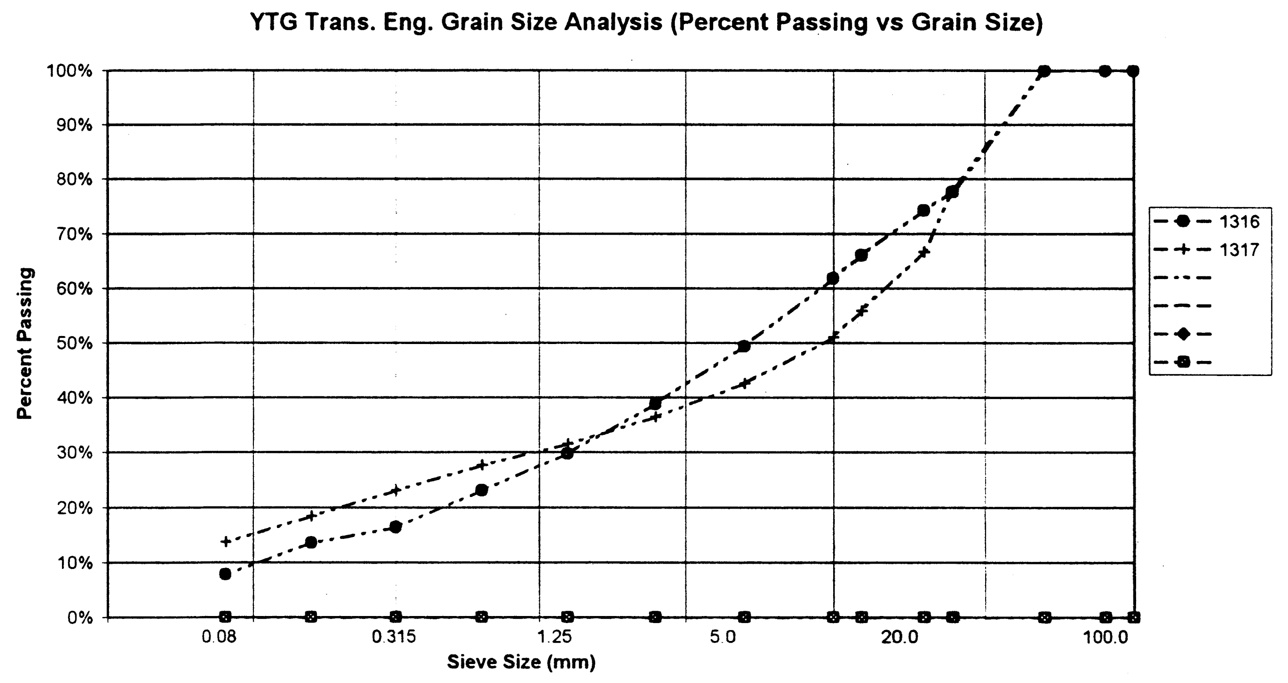
DRILL UNIT: MOBILE B40 L

HOLE LOCATION: See Testhole Log Sheet

LOGGED BY: G.C.

DATE COMP: 2001/09/17

FIELD NO:	1316	1317				
LAB NO:	2093	2094				
DEPTH:	1.0-1.5	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	78%	78%				
20.0	74%	67%				
12.5	66%	56%				
10.0	62%	51%				
5.0	49%	43%				
2.5	39%	37%				
1.25	30%	32%				
0.630	23%	28%				
0.315	16%	23%				
0.160	14%	18%				
0.080	8%	14%				
M.C.(%):	5%	12%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	51	57				
% SAND:	42	29				
% FINES:	8	14				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY GRAVEL WITH SAND (GM)				

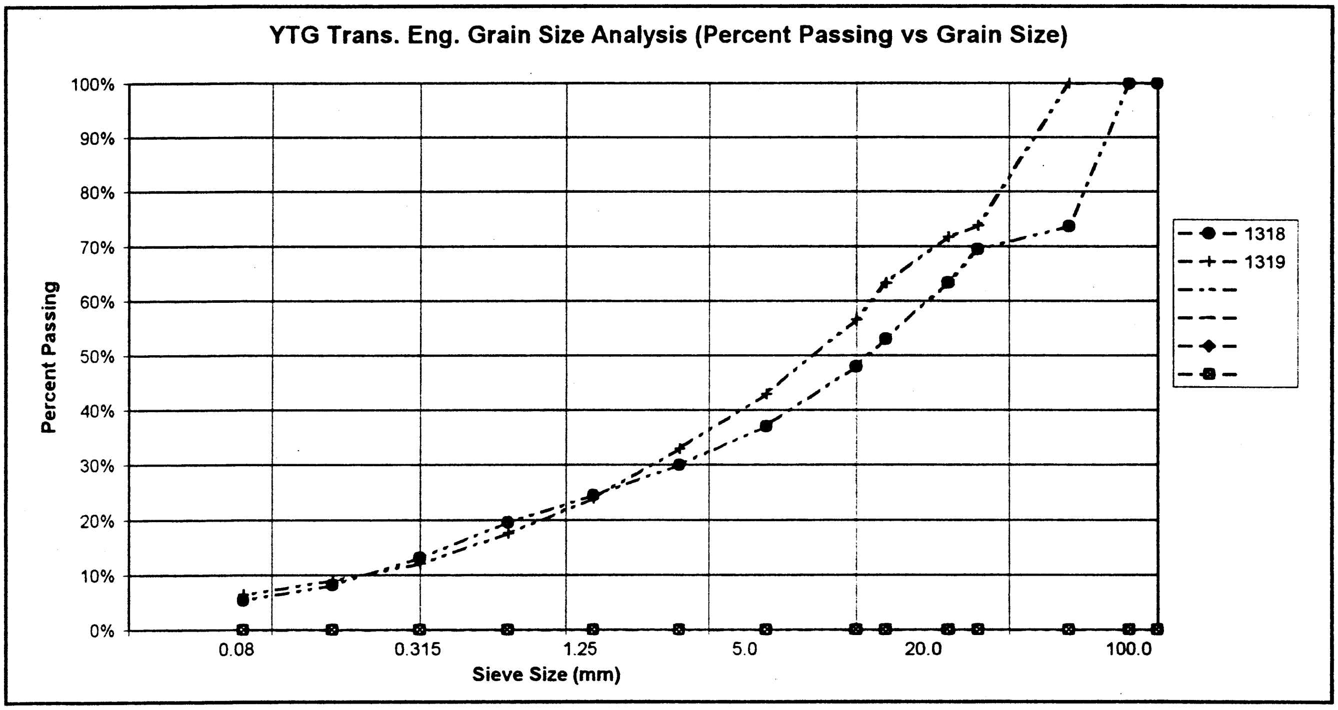


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Bock's Brook
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 622-1893

DATE COMP: 2001/09/17

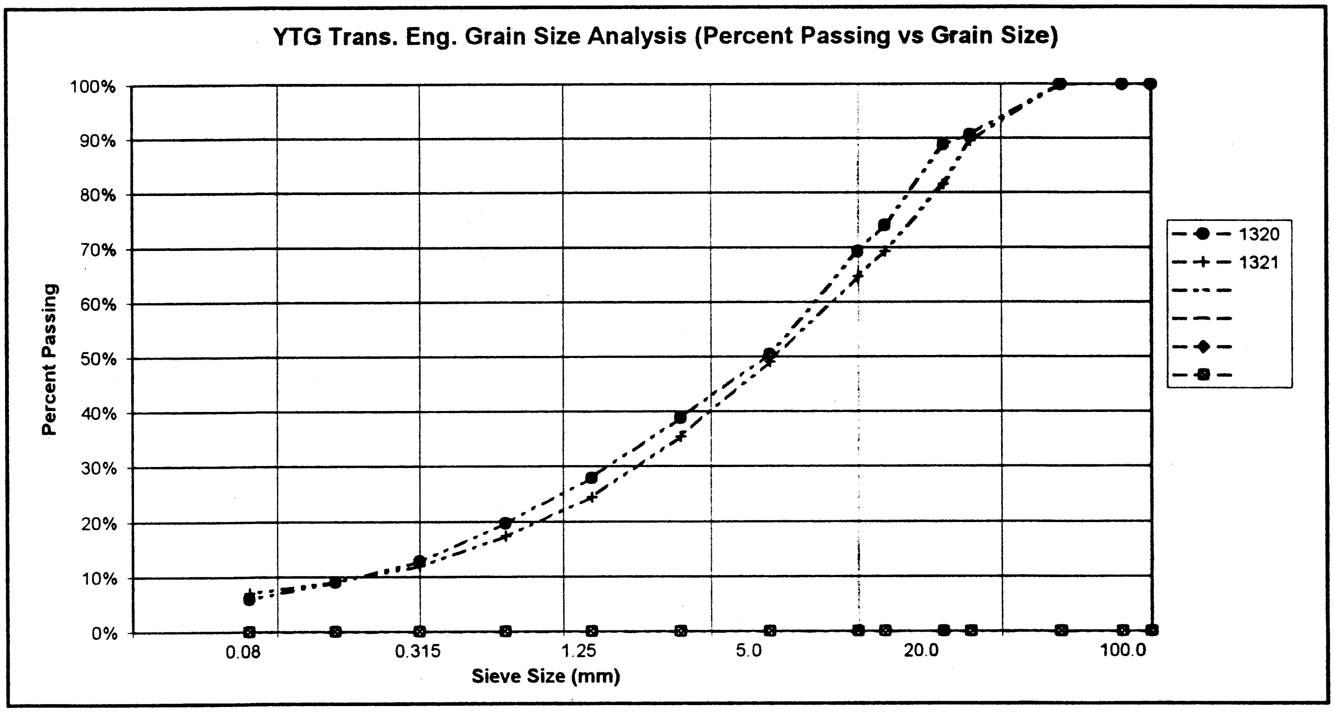
FIELD NO:	1318	1319				
LAB NO:	2095	2096				
DEPTH:	0.6-1.2	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	74%	100%				
25.0	69%	74%				
20.0	63%	72%				
12.5	53%	63%				
10.0	48%	57%				
5.0	37%	43%				
2.5	30%	33%				
1.25	25%	24%				
0.630	20%	18%				
0.315	13%	12%				
0.160	8%	9%				
0.080	5%	6%				
M.C.(%):	3%	4%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	63	57				
% SAND:	32	37				
% FINES:	5	6				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				


YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Bock's Brook
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 622-1894
DATE COMP: 2001/09/17

FIELD NO:	1320	1321				
LAB NO:	2097	2098				
DEPTH:	1.0-2.0	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	91%	90%				
20.0	89%	82%				
12.5	74%	69%				
10.0	69%	65%				
5.0	50%	49%				
2.5	39%	35%				
1.25	28%	24%				
0.630	20%	17%				
0.315	13%	12%				
0.160	9%	9%				
0.080	6%	7%				
M.C.(%):	3%	4%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	50	51				
% SAND:	44	42				
% FINES:	6	7				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				

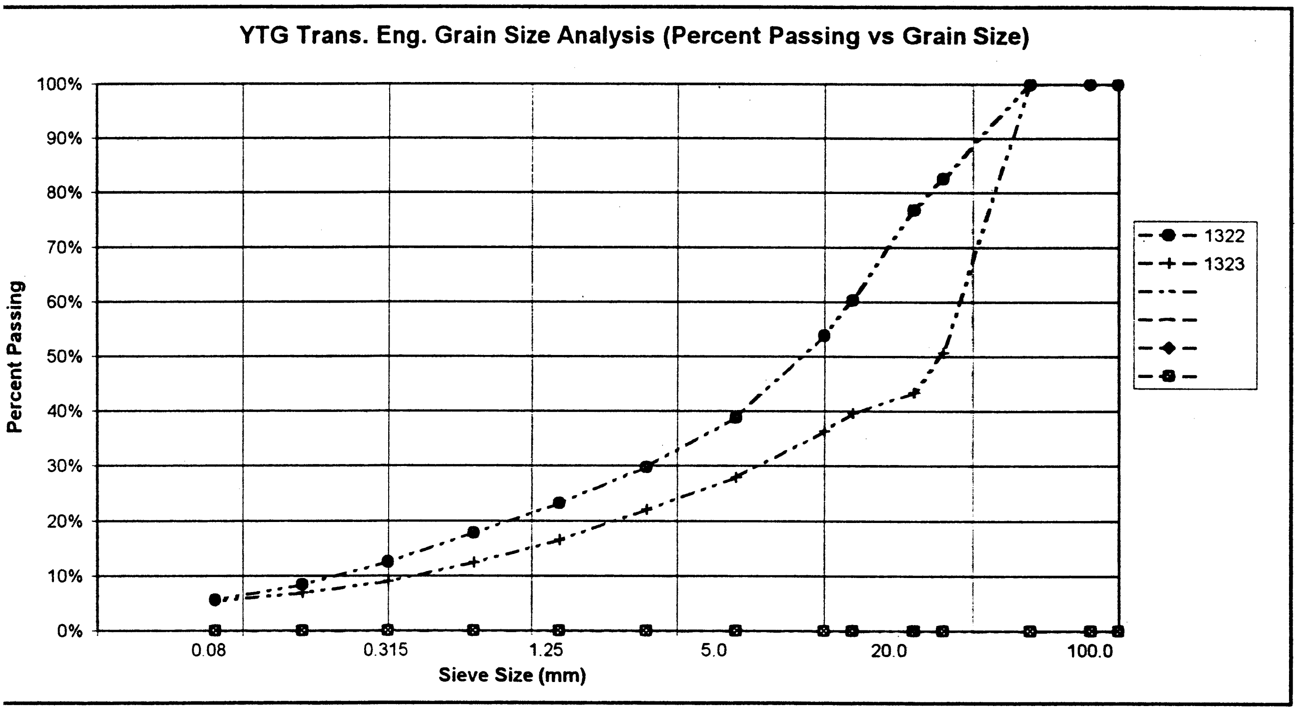

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

JECT NUMBER: 092-202101-0361-1
ENT: ENGINEERING CAPITAL
JECT NAME: SHAKWAK SEG 11
JECT LOCATION: Bock's Brook
ILL UNIT: MOBILE B40 L
LE LOCATION: See Testhole Log Sheet
GED BY: G.C.

HOLE No.: 622-1895

DATE COMP: 2001/09/17

FIELD NO:	1322	1323				
LAB NO:	2099	2100				
DEPTH:	1.0-2.0	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	83%	51%				
20.0	77%	43%				
12.5	60%	40%				
10.0	54%	36%				
5.0	39%	28%				
2.5	30%	22%				
1.25	23%	17%				
0.630	18%	12%				
0.315	13%	9%				
0.160	9%	7%				
0.080	6%	5%				
M.C.(%):	3%	3%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	61	72				
% SAND:	33	23				
% FINES:	6	5				
ASSIFICATION	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)				

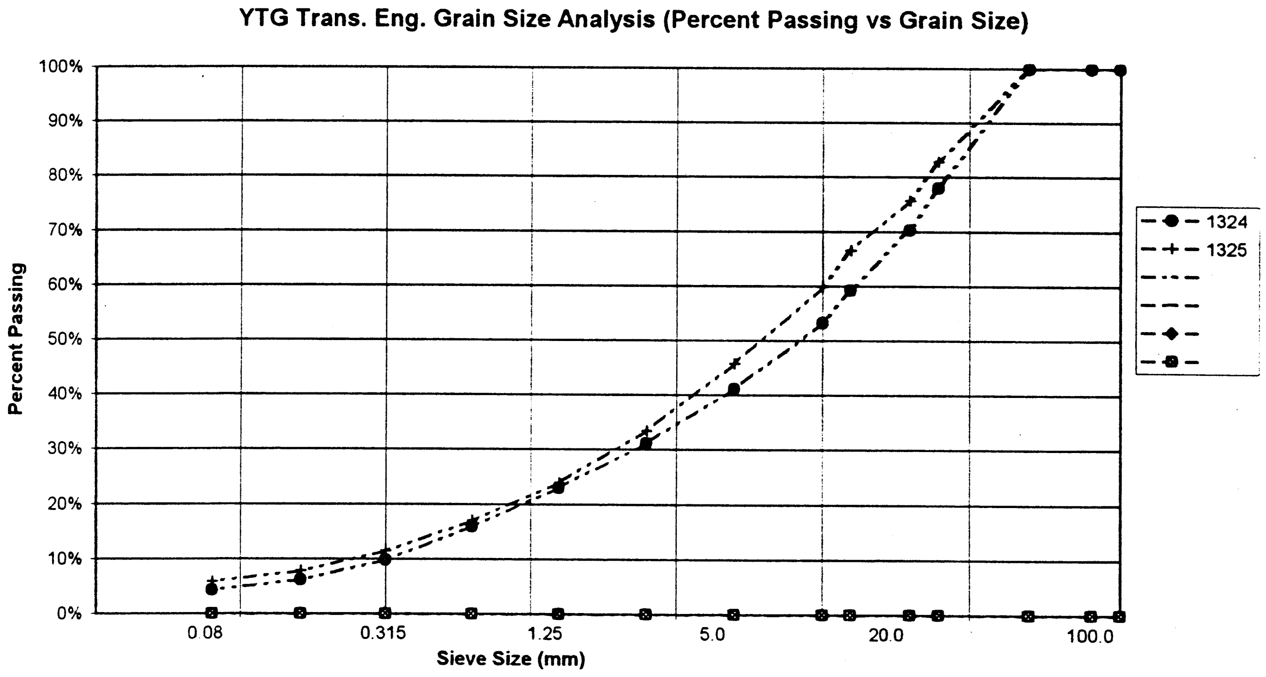


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Bock's Brook
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 622-1896

DATE COMP: 2001/09/17

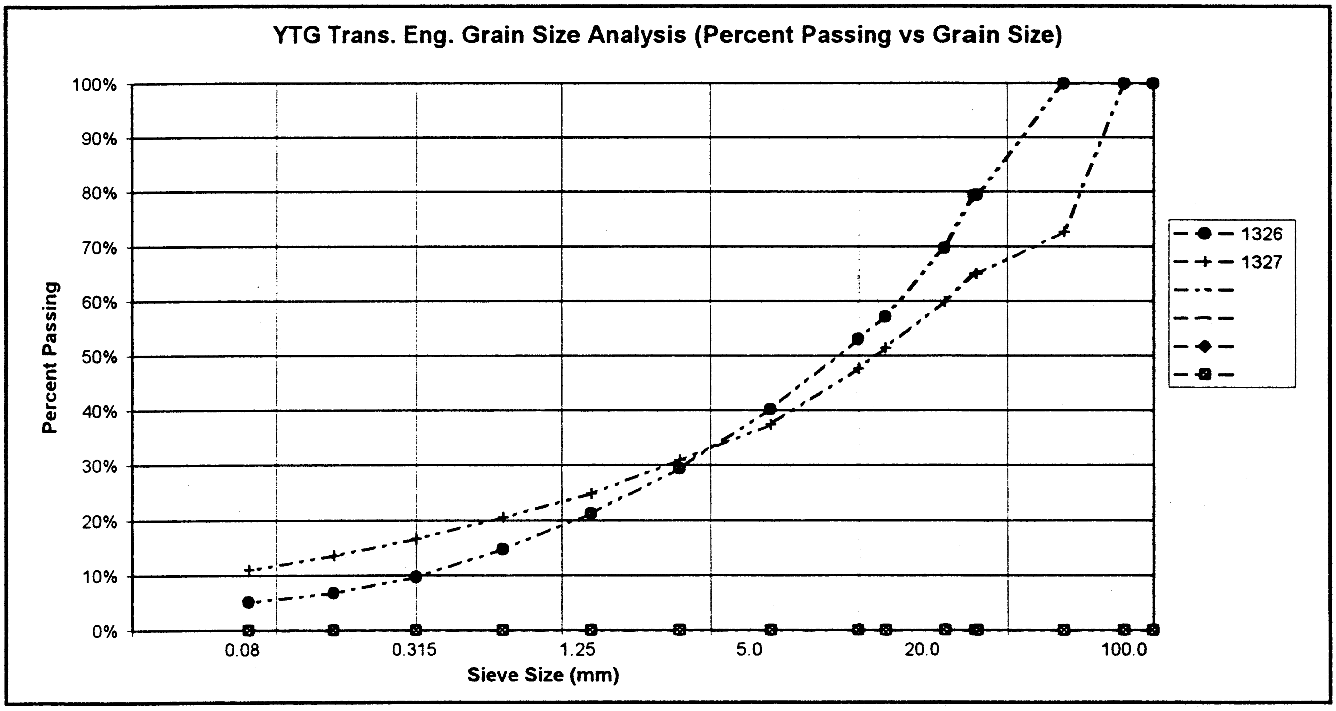
FIELD NO:	1324	1325				
LAB NO:	2101	2102				
DEPTH:	1.0-2.0	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	78%	83%				
20.0	70%	76%				
12.5	59%	67%				
10.0	53%	60%				
5.0	41%	46%				
2.5	31%	33%				
1.25	23%	24%				
0.630	16%	17%				
0.315	10%	11%				
0.160	6%	8%				
0.080	4%	6%				
M.C.(%):	3%	3%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	59	54				
% SAND:	37	40				
% FINES:	4	6				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				


YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Bock's Brook
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 622-1897
DATE COMP: 2001/09/17

FIELD NO:	1326	1327				
LAB NO:	2103	2104				
DEPTH:	1.0-2.0	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	73%				
25.0	79%	65%				
20.0	70%	60%				
12.5	57%	51%				
10.0	53%	48%				
5.0	40%	37%				
2.5	29%	31%				
1.25	21%	25%				
0.630	15%	21%				
0.315	10%	17%				
0.160	7%	14%				
0.080	5%	11%				
M.C.(%):	4%	9%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	60	63				
% SAND:	35	26				
% FINES:	5	11				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				

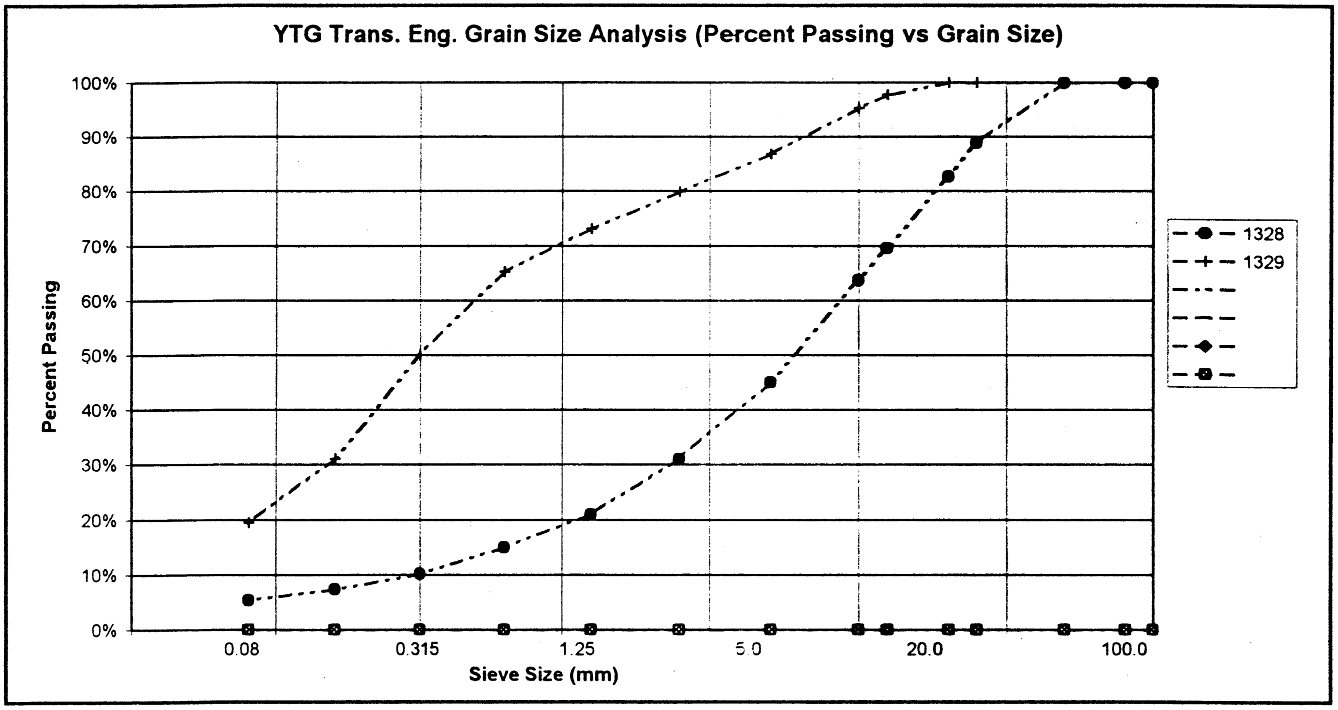


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Bock's Brook
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 622-1898

DATE COMP: 2001/09/17

FIELD NO:	1328	1329				
LAB NO:	2105	2106				
DEPTH:	1.0-2.0	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	89%	100%				
20.0	83%	100%				
12.5	70%	98%				
10.0	64%	95%				
5.0	45%	87%				
2.5	31%	80%				
1.25	21%	73%				
0.630	15%	65%				
0.315	10%	50%				
0.160	7%	31%				
0.080	5%	19%				
M.C.(%):	3%	14%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	55	13				
% SAND:	40	67				
% FINES:	5	19				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND (SM)				

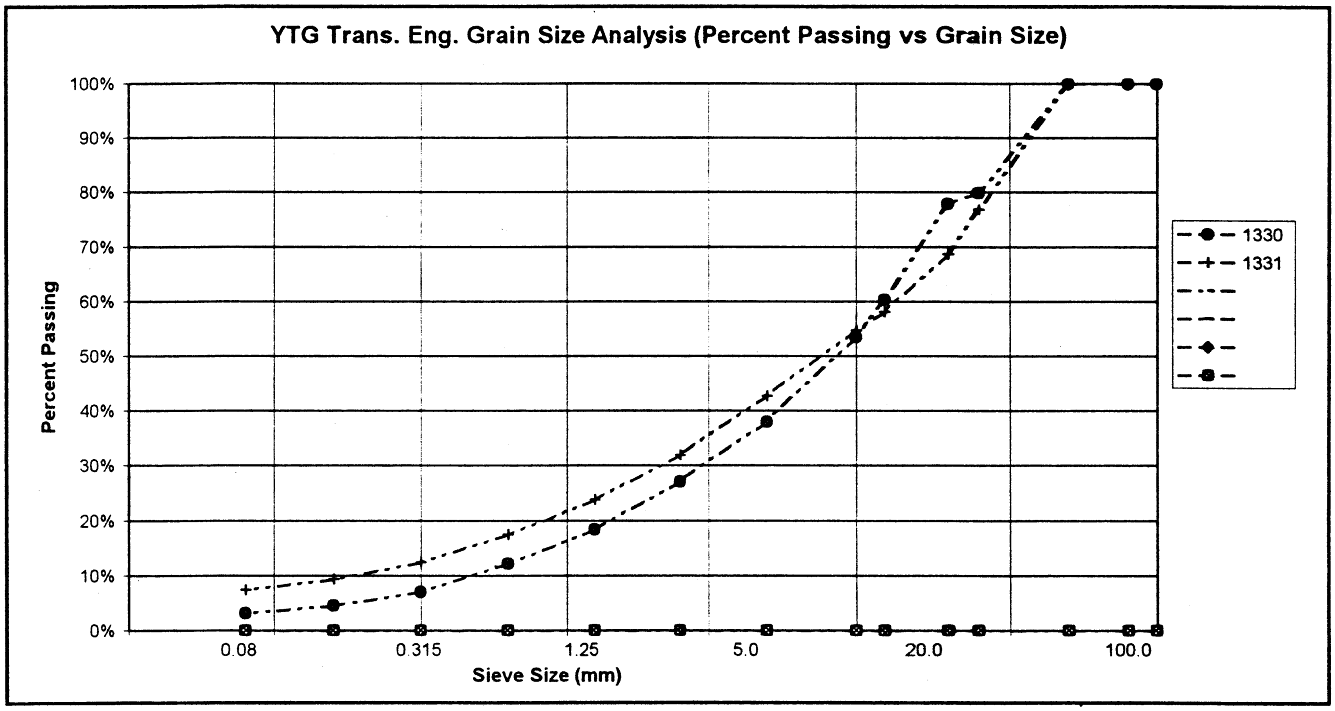


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Bock's Brook
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 622-1899

DATE COMP: 2001/09/17

FIELD NO:	1330	1331				
LAB NO:	2107	2108				
DEPTH:	1.0-2.0	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	80%	77%				
20.0	78%	69%				
12.5	60%	58%				
10.0	53%	55%				
5.0	38%	43%				
2.5	27%	32%				
1.25	18%	24%				
0.630	12%	18%				
0.315	7%	12%				
0.160	5%	9%				
0.080	3%	7%				
M.C.(%):	3%	3%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	62	57				
% SAND:	35	35				
% FINES:	3	7				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				

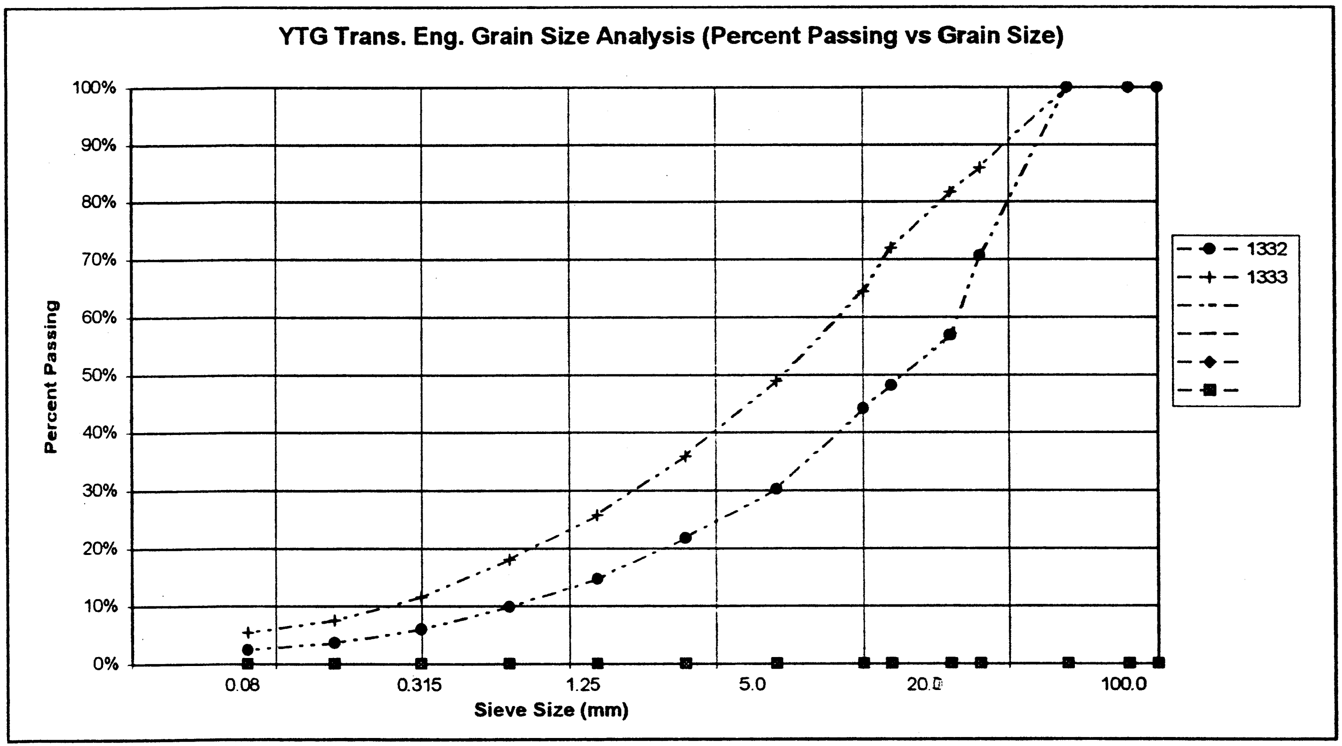


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Bock's Brook
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 622-1900

DATE COMP: 2001/09/17

FIELD NO:	1332	1333				
LAB NO:	2109	2110				
DEPTH:	1.0-2.0	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	71%	86%				
20.0	57%	82%				
12.5	48%	72%				
10.0	44%	64%				
5.0	30%	49%				
2.5	22%	36%				
1.25	15%	26%				
0.630	10%	18%				
0.315	6%	12%				
0.160	4%	8%				
0.080	2%	5%				
M.C.(%):	3%	3%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	70	51				
% SAND:	28	43				
% FINES:	2	5				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				



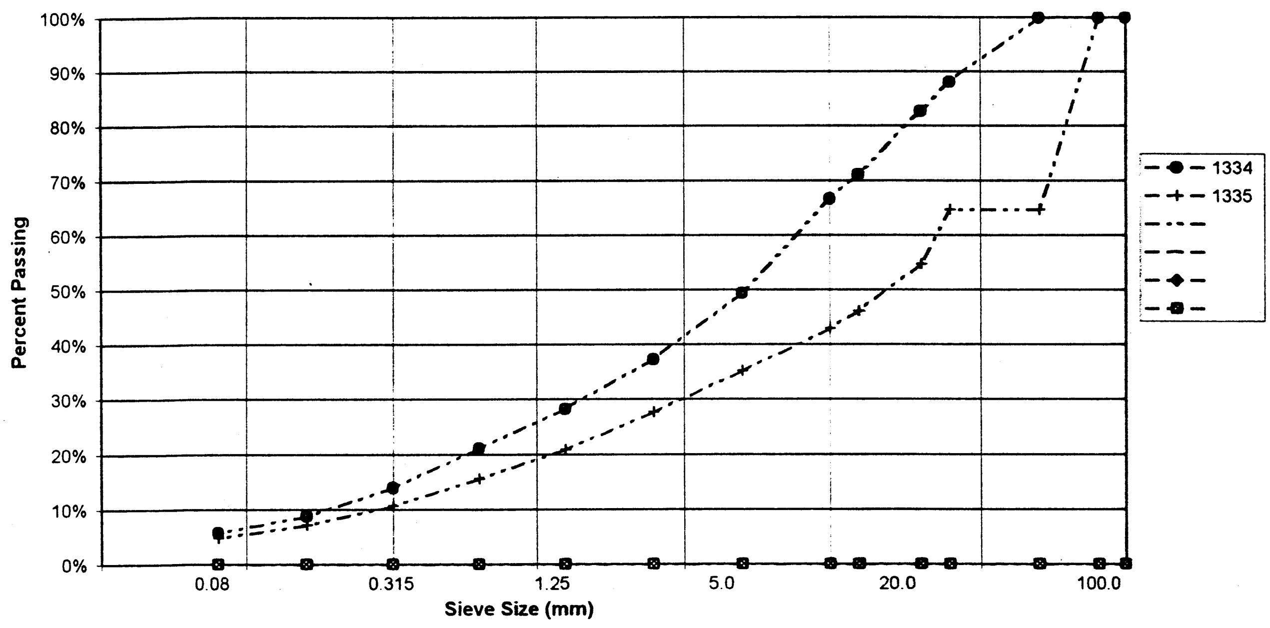
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Bock's Brook
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 622-1901

DATE COMP: 2001/09/17

FIELD NO:	1334	1335				
LAB NO:	2111	2112				
DEPTH:	1.0-2.0	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	65%				
25.0	88%	65%				
20.0	83%	55%				
12.5	71%	46%				
10.0	67%	43%				
5.0	49%	35%				
2.5	37%	28%				
1.25	28%	21%				
0.630	21%	16%				
0.315	14%	11%				
0.160	9%	7%				
0.080	6%	5%				
M.C.(%):	3%	3%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	51	65				
% SAND:	44	30				
% FINES:	6	5				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)				

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



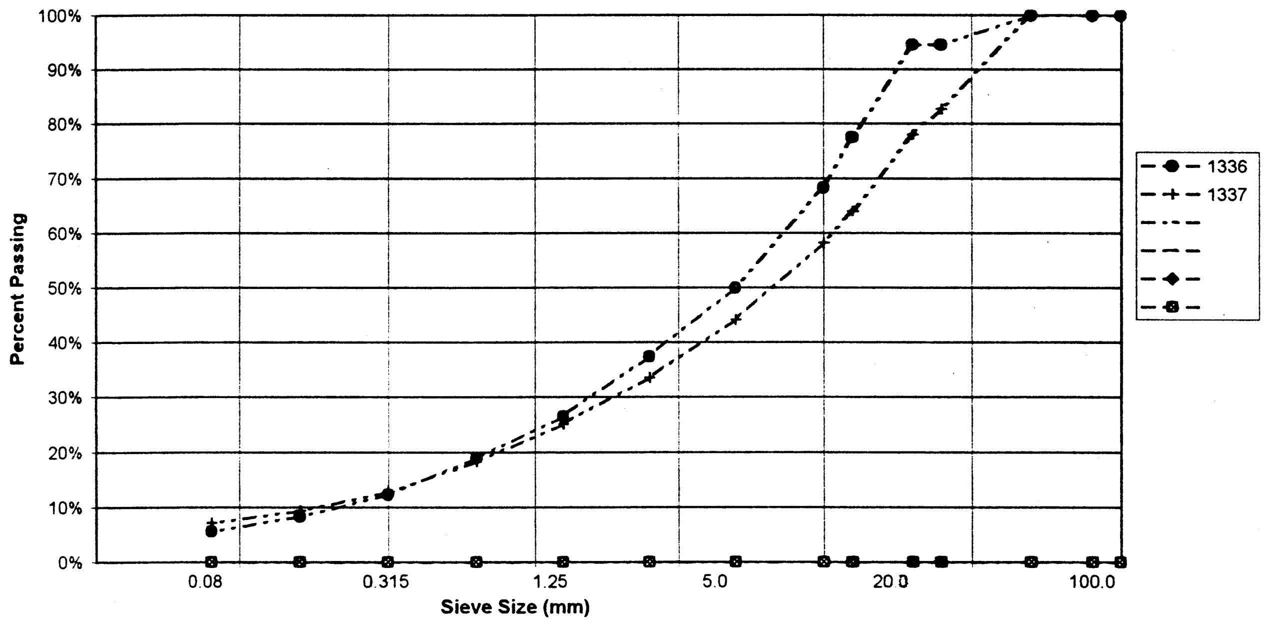
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Bock's Brook
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 622-1902

DATE COMP: 2001/09/17

FIELD NO:	1336	1337				
LAB NO:	2113	2114				
DEPTH:	1.0-2.0	1.0-1.2				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	95%	83%				
20.0	95%	78%				
12.5	78%	64%				
10.0	68%	58%				
5.0	50%	44%				
2.5	37%	34%				
1.25	27%	25%				
0.630	19%	18%				
0.315	12%	13%				
0.160	8%	9%				
0.080	6%	7%				
M.C.(%):	3%	4%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	50	56				
% SAND:	44	37				
% FINES:	6	7				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

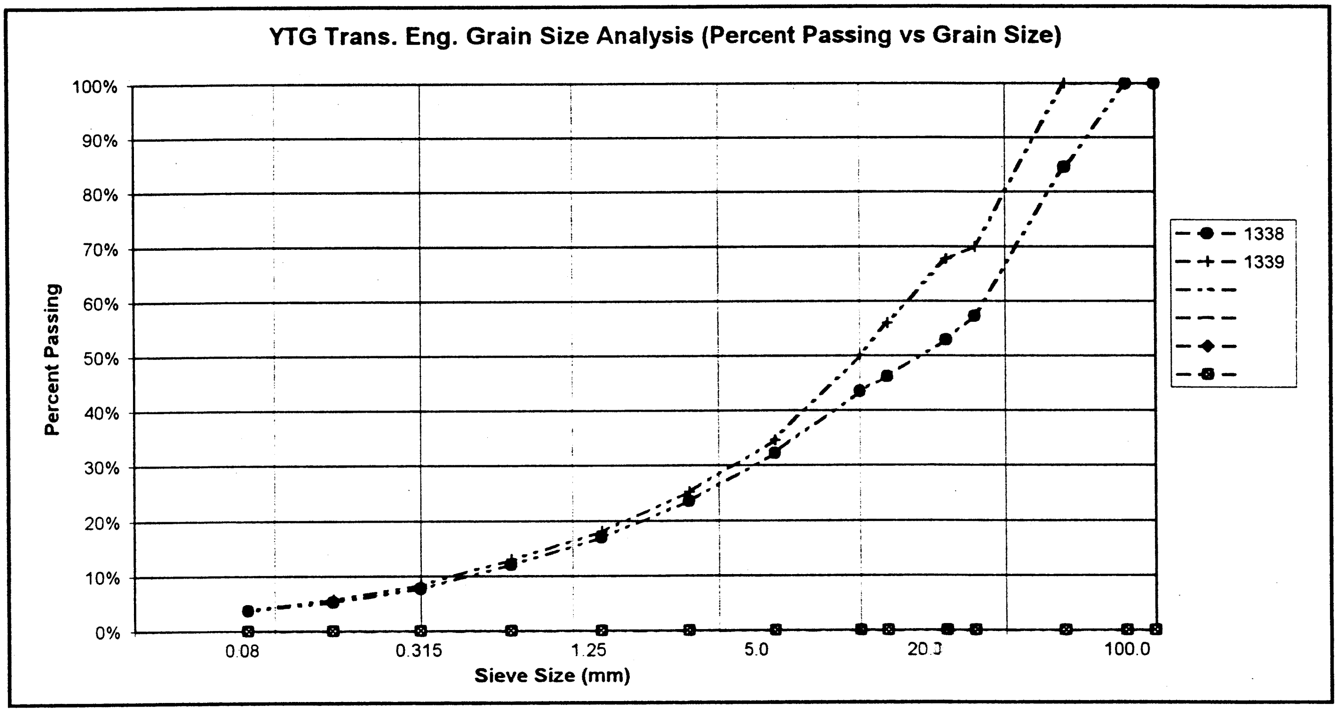


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Bock's Brook
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 622-1903

DATE COMP: 2001/09/17

FIELD NO:	1338	1339				
LAB NO:	2115	2116				
DEPTH:	1.0-2.0	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	85%	100%				
25.0	57%	70%				
20.0	53%	68%				
12.5	46%	56%				
10.0	44%	50%				
5.0	32%	35%				
2.5	24%	25%				
1.25	17%	18%				
0.630	12%	13%				
0.315	8%	8%				
0.160	5%	6%				
0.080	4%	4%				
M.C.(%):	4%	4%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	68	65				
% SAND:	28	31				
% FINES:	4	4				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)				

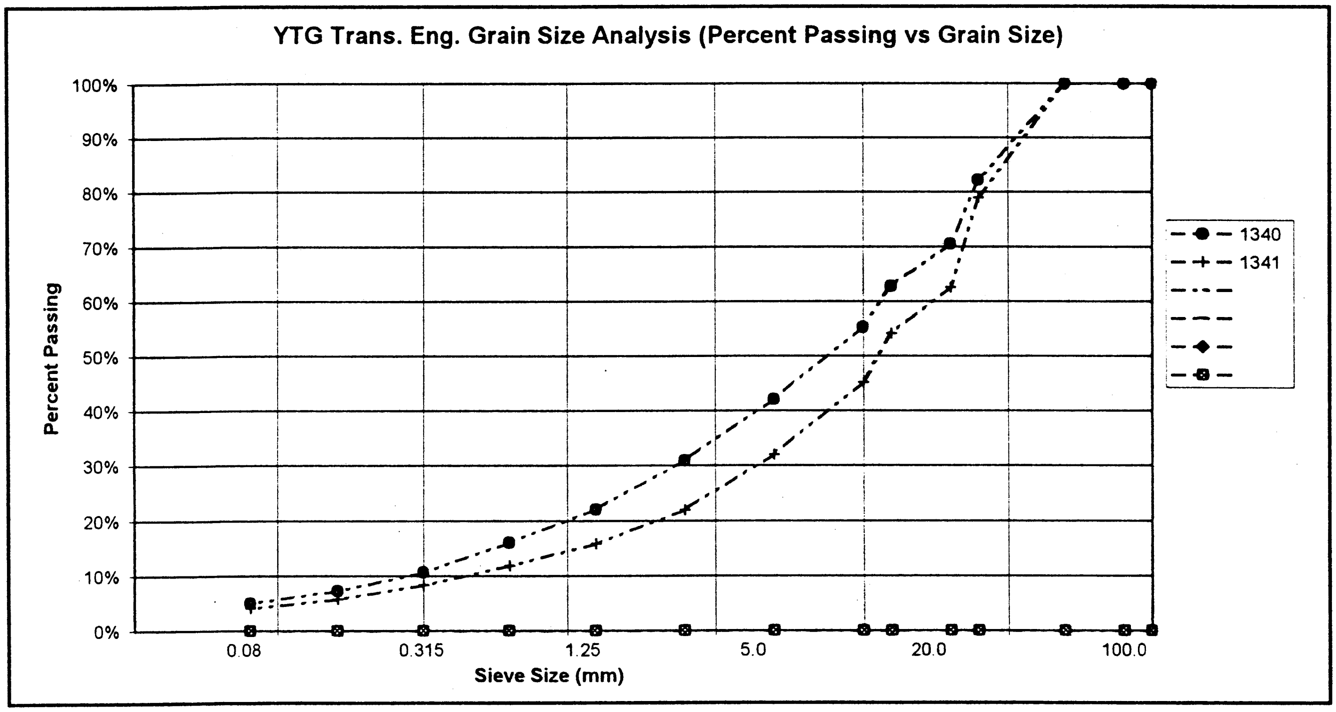


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Bock's Brook
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 622-1904

DATE COMP: 2001/09/17

FIELD NO:	1340	1341				
LAB NO:	2117	2118				
DEPTH:	1.0-2.0	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	82%	79%				
20.0	70%	63%				
12.5	63%	54%				
10.0	55%	45%				
5.0	42%	32%				
2.5	31%	22%				
1.25	22%	16%				
0.630	16%	12%				
0.315	11%	8%				
0.160	7%	6%				
0.080	5%	4%				
M.C.(%):	4%	8%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	58	68				
% SAND:	37	28				
% FINES:	5	4				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)				

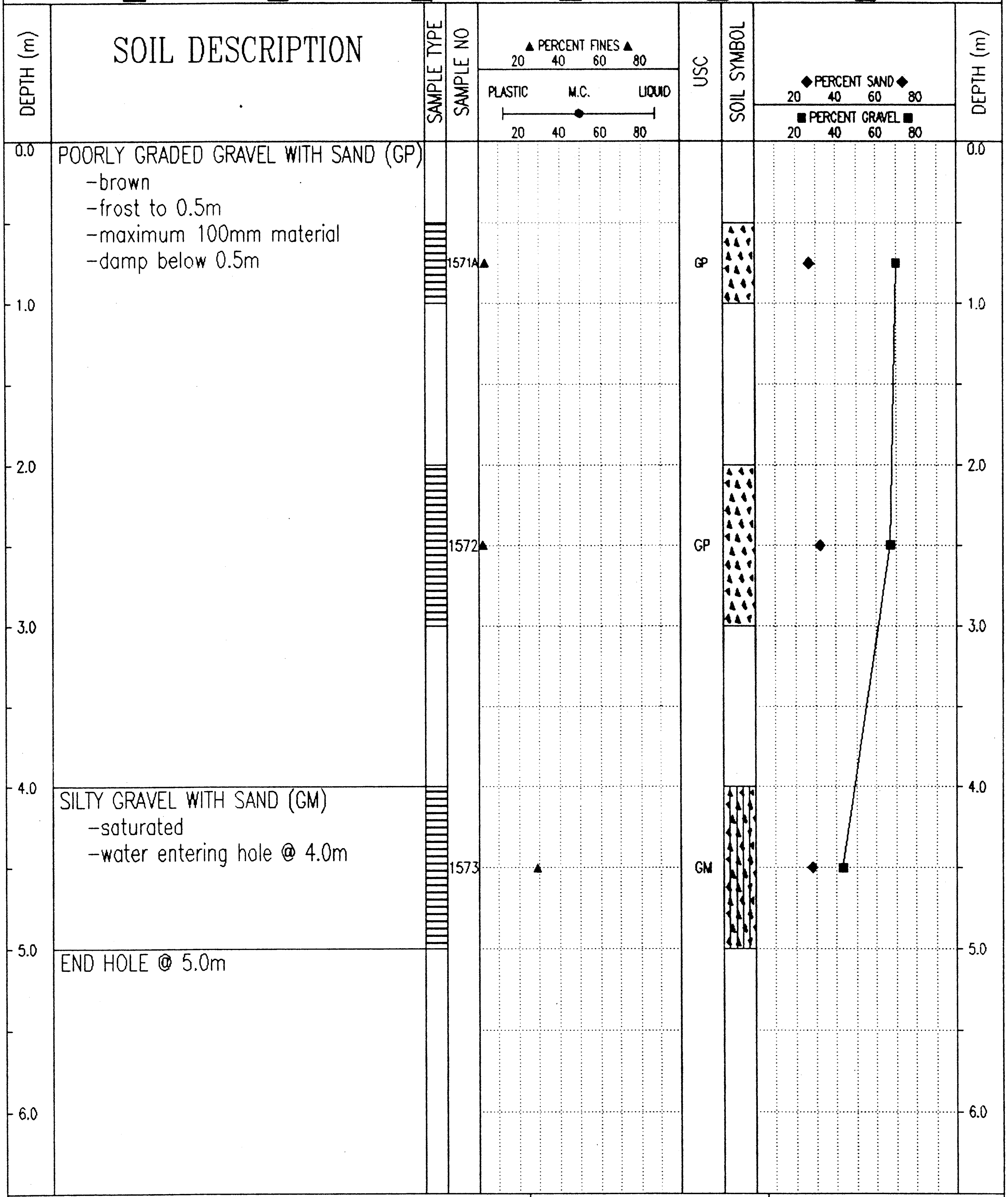

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

Km 1738.8 LHS Alaska Highway
(Bocks Brook)

2001
Test Pit Logs

SUBSURFACE EXPLORATION & TESTING REPORT.	SHAKWAK SEG 11	TEST PIT NO: 630-1699
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
CAT 320L EXCAVATOR	LOCATION: 6789790N / 620871E	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▯ CORE



POORLY GRADED GRAVEL WITH SAND (GP)
- brown
- frost to 0.5m
- maximum 100mm material
- damp below 0.5m

SILTY GRAVEL WITH SAND (GM)
- saturated
- water entering hole @ 4.0m

END HOLE @ 5.0m

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 01/11/19
	Fig. No:	Page 1 of 1

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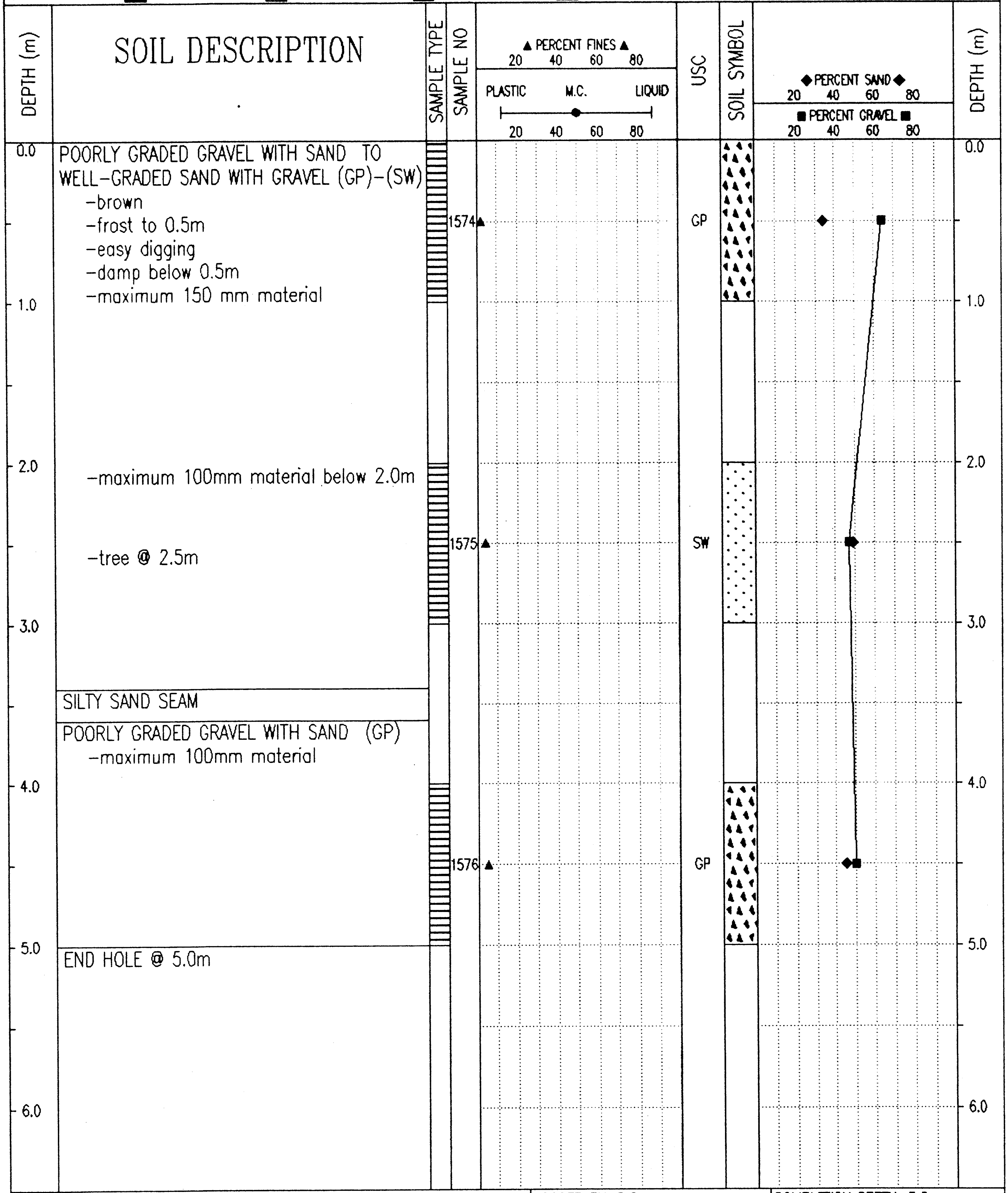
SUBSURFACE EXPLORATION & TESTING REPORT.	SHAKWAK SEG 11	TEST PIT NO: 630-1700
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
CAT 320L EXCAVATOR	LOCATION: 6789631N / 620740E	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ▮ CORE



POORLY GRADED GRAVEL WITH SAND TO WELL-GRADED SAND WITH GRAVEL (GP)-(SW)

- brown
- frost to 0.5m
- easy digging
- damp below 0.5m
- maximum 150 mm material
- maximum 100mm material below 2.0m
- tree @ 2.5m

SILTY SAND SEAM

POORLY GRADED GRAVEL WITH SAND (GP)

- maximum 100mm material

END HOLE @ 5.0m

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 01/11/19
	Fig. No:	Page 1 of 1

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SUBSURFACE EXPLORATION & TESTING REPORT.	SHAKWAK SEG 11	TEST PIT NO: 630–1701
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092–202101–0361
CAT 320L EXCAVATOR	LOCATION: 6789499N / 620642E	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ◧ CORE

DEPTH (m)

SOIL DESCRIPTION

0.0

POORLY GRADED GRAVEL WITH SAND (GP)
- brown
- frost to 0.5m
- maximum 150mm material
- damp below 0.5m

1.0

WELL–GRADED SAND WITH GRAVEL (SW)
- brown
- damp
- maximum 100mm material

2.0

3.0

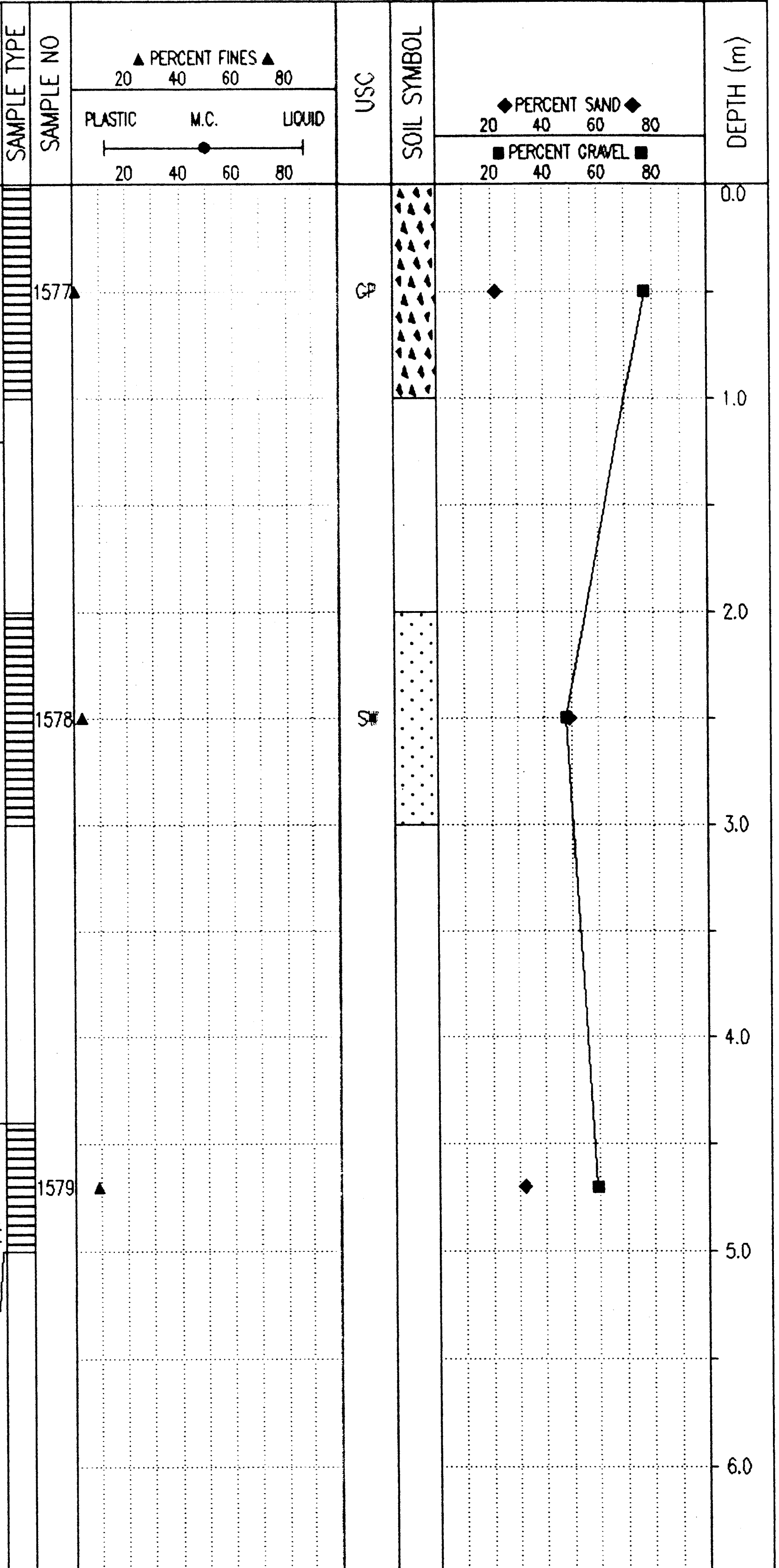
4.0

SILT WITH ASH, SAND, & GRAVEL
- brown
- moist
- sample 1579 tested (GP–GM) but is not representative as it is contaminated by material above

5.0

END HOLE @ 5.0m

6.0



Government of Yukon
Transportation Engineering

LOGGED BY: G.C.	COMPLETION DEPTH: 5.0 m
REVIEWED BY:	COMPLETE: 01/11/19
Fig. No:	Page 1 of 1

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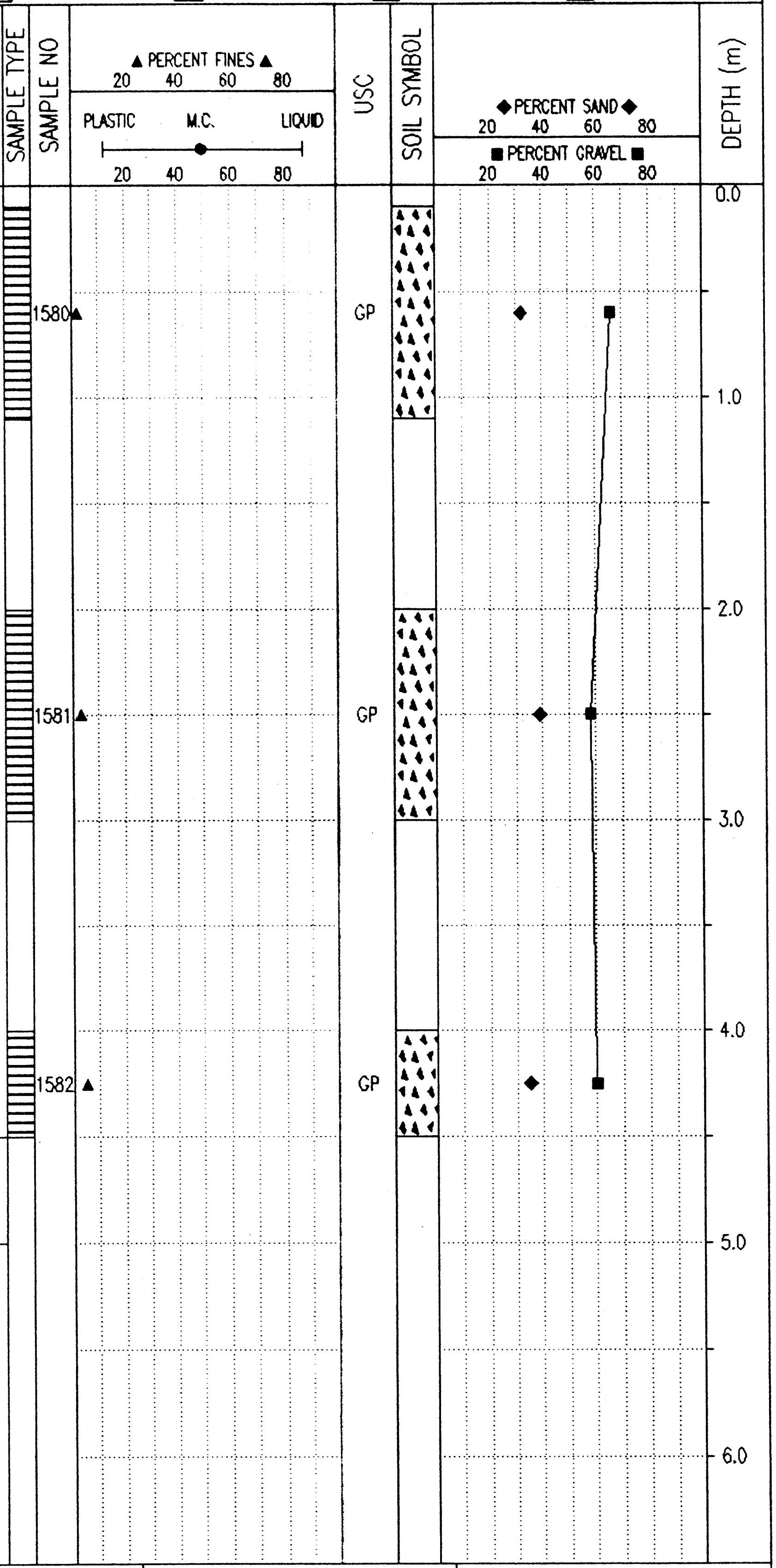
SUBSURFACE EXPLORATION & TESTING REPORT.	SHAKWAK SEG 11	TEST PIT NO: 630-1702
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
CAT 320L EXCAVATOR	LOCATION: 6789353N / 620538E	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ◧ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	POORLY GRADED GRAVEL WITH SAND (GP) -brown -frost to 0.5m -maximum 150mm material -damp below 0.5m
4.5	ORGANIC & SILT -orange / brown -moist
5.0	END HOLE @ 5.0m



Government of Yukon Transportation Engineering	LOGGED BY: G.C. REVIEWED BY: Fig. No:
	COMPLETION DEPTH: 5.0 m COMPLETE: 01/11/19

02/01/17 01:16PM

SUBSURFACE EXPLORATION & TESTING REPORT.	SHAKWAK SEG 11	TEST PIT NO: 630-1703
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
CAT 320L EXCAVATOR	LOCATION: 6789203N / 620435E	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE

DEPTH (m)

SOIL DESCRIPTION

0.0 POORLY GRADED GRAVEL WITH SAND (GP)
- brown
- frost to 0.5m
- maximum 200mm material
- damp below 0.5m

1.0
- maximum 100mm material
- easy digging below 1.0m

2.0
- moist below 2.0m
- maximum 150mm material below 2.0m

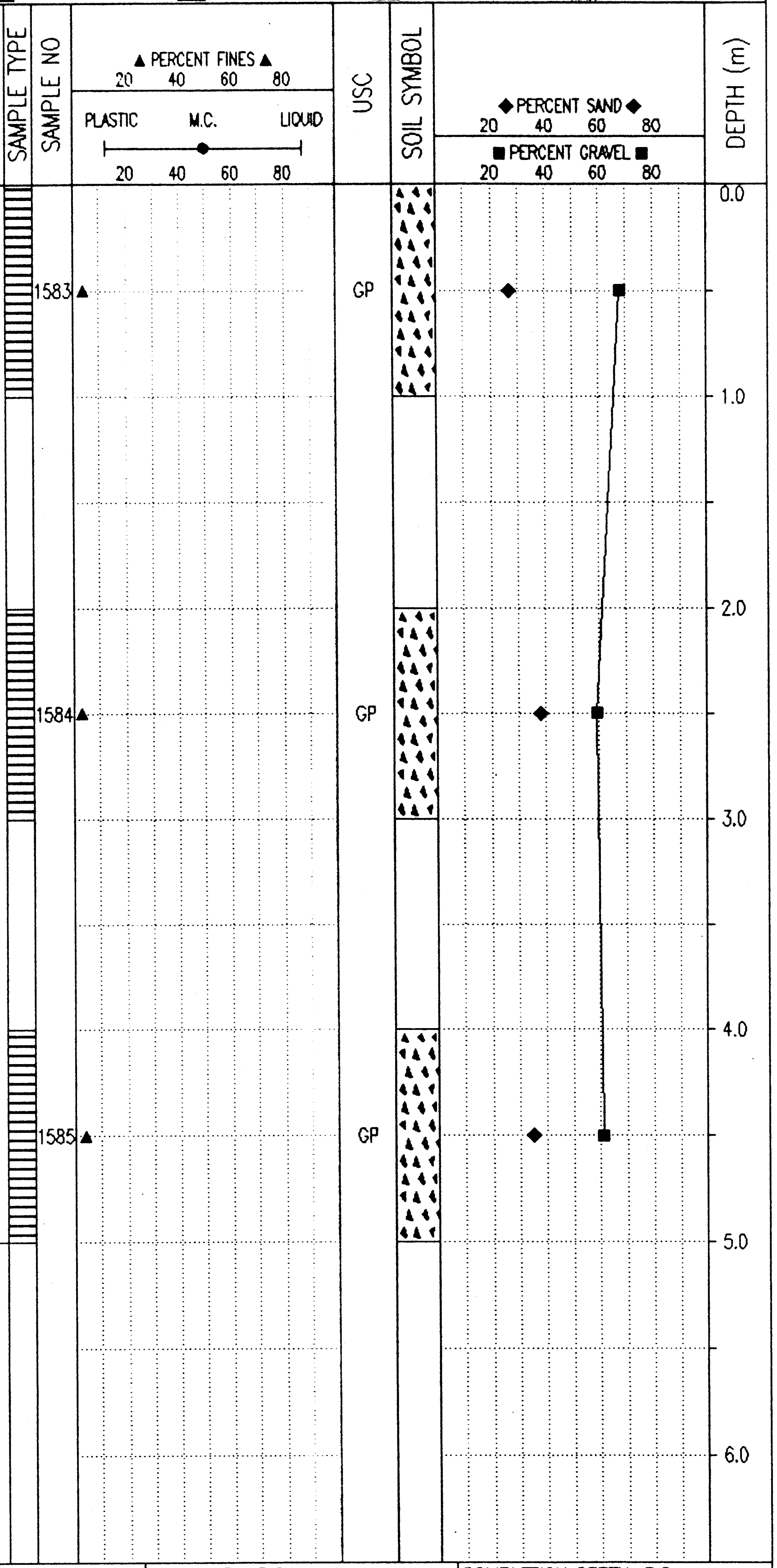
3.0

4.0

5.0 END HOLE @ 5.0m

Note: No silt seam

6.0



Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 01/11/19
	Fig. No:	Page 1 of 1

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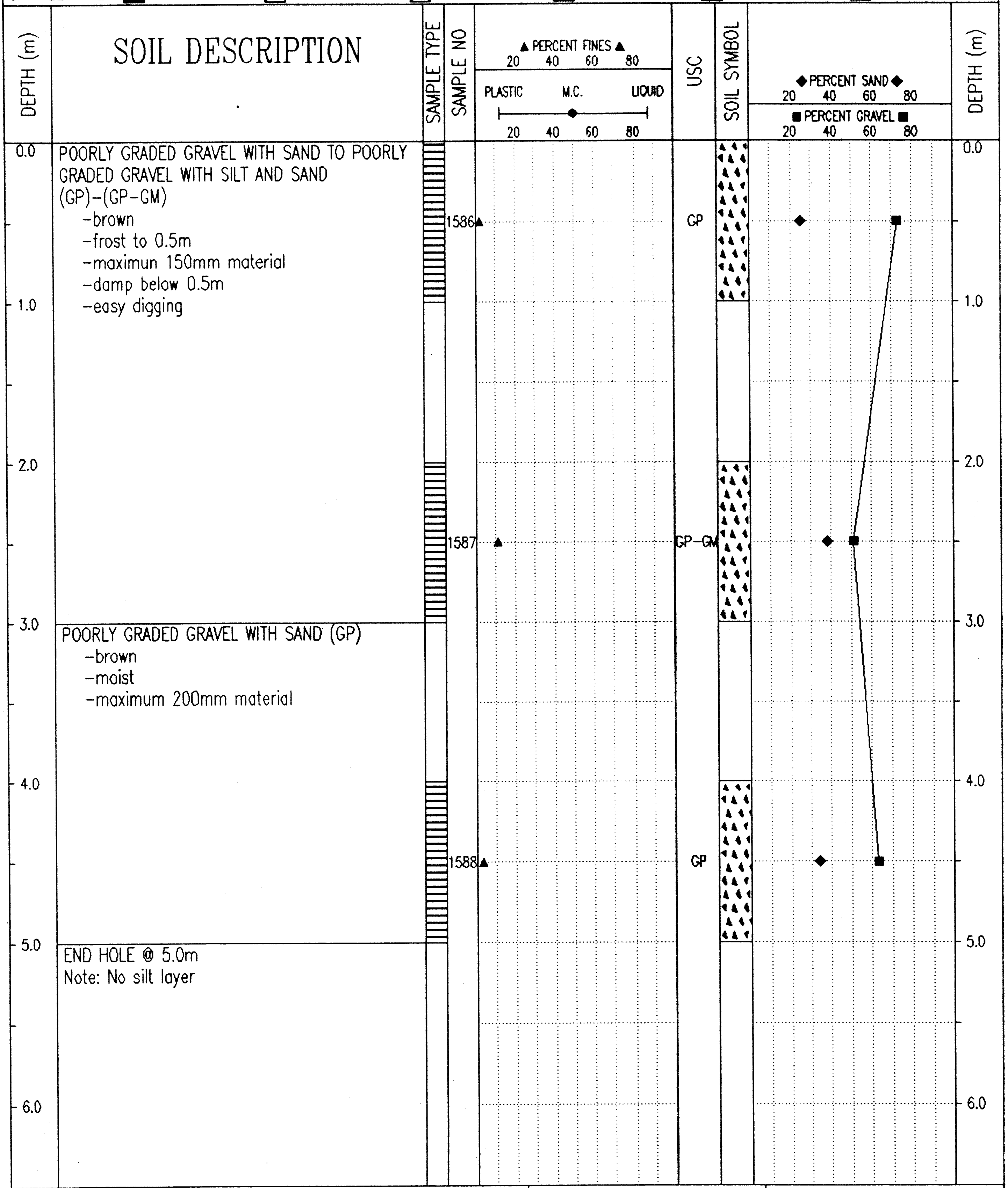
SUBSURFACE EXPLORATION & TESTING REPORT.	SHAKWAK SEG 11	TEST PIT NO: 630-1704
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
CAT 320L EXCAVATOR	LOCATION: 6789113N / 620362E	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SOIL DESCRIPTION

0.0 POORLY GRADED GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT AND SAND (GP)-(GP-GM)

- -brown
- -frost to 0.5m
- -maximun 150mm material
- -damp below 0.5m
- -easy digging

3.0 POORLY GRADED GRAVEL WITH SAND (GP)

- -brown
- -moist
- -maximum 200mm material

5.0 END HOLE @ 5.0m

Note: No silt layer

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 01/11/19
	Fig. No:	Page 1 of 1

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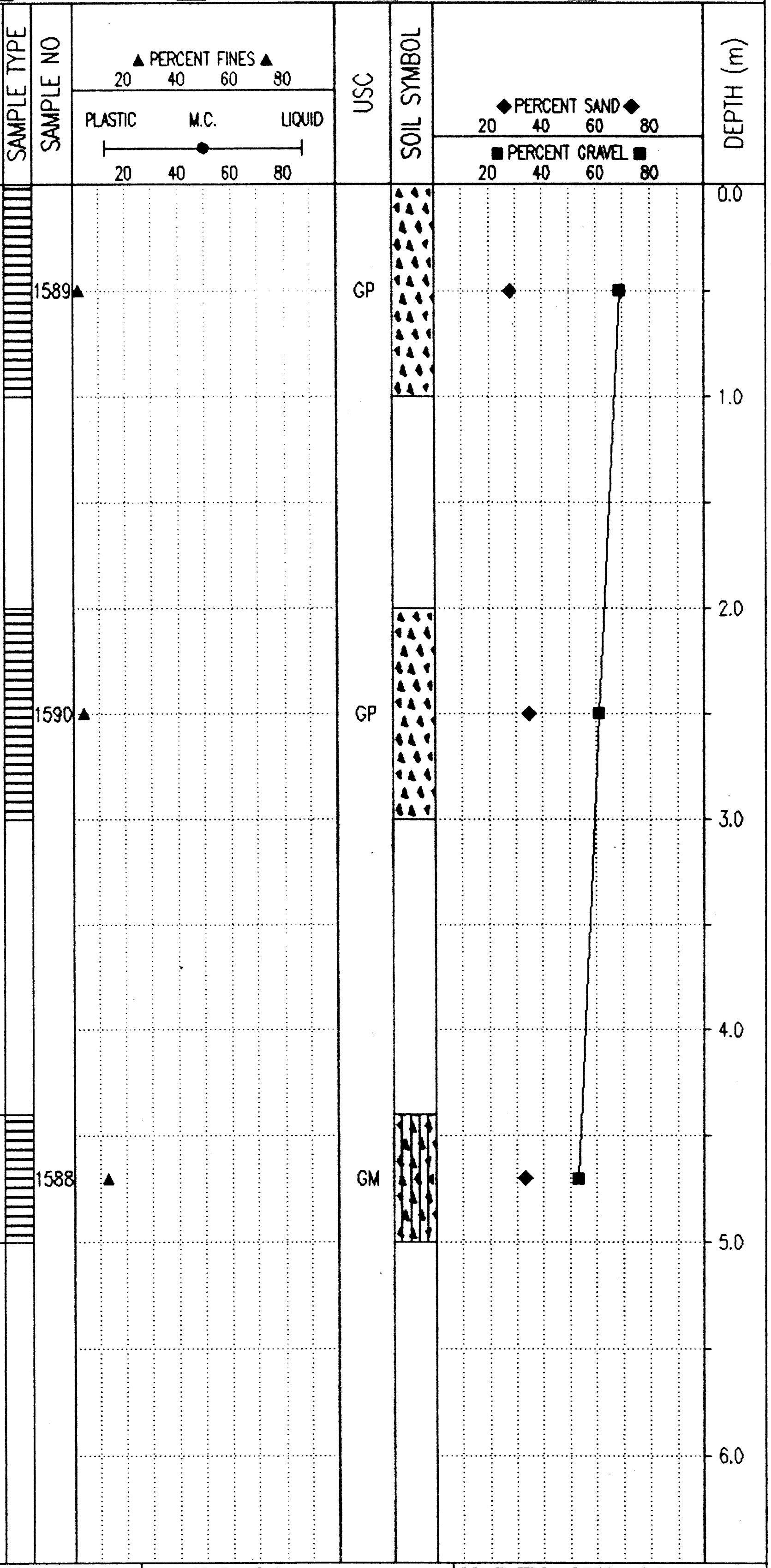
SUBSURFACE EXPLORATION & TESTING REPORT.	SHAKWAK SEG 11	TEST PIT NO: 630-1705
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
CAT 320L EXCAVATOR	LOCATION: 6788960N / 620275E	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ◧ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE NO	USC
0.0	POORLY GRADED GRAVEL WITH SAND (GP) -brown -frost to 0.5m -maximum 150mm material -damp below 0.5m -easy digging	1589	GP
		1590	GP
	SILTY GRAVEL WITH SAND (GM)	1588	GM
5.0	END HOLE @ 5.0m		



Government of Yukon Transportation Engineering	LOGGED BY: G.C.
	REVIEWED BY:
	Fig. No:
COMPLETION DEPTH: 5.0 m	
COMPLETE: 01/11/19	
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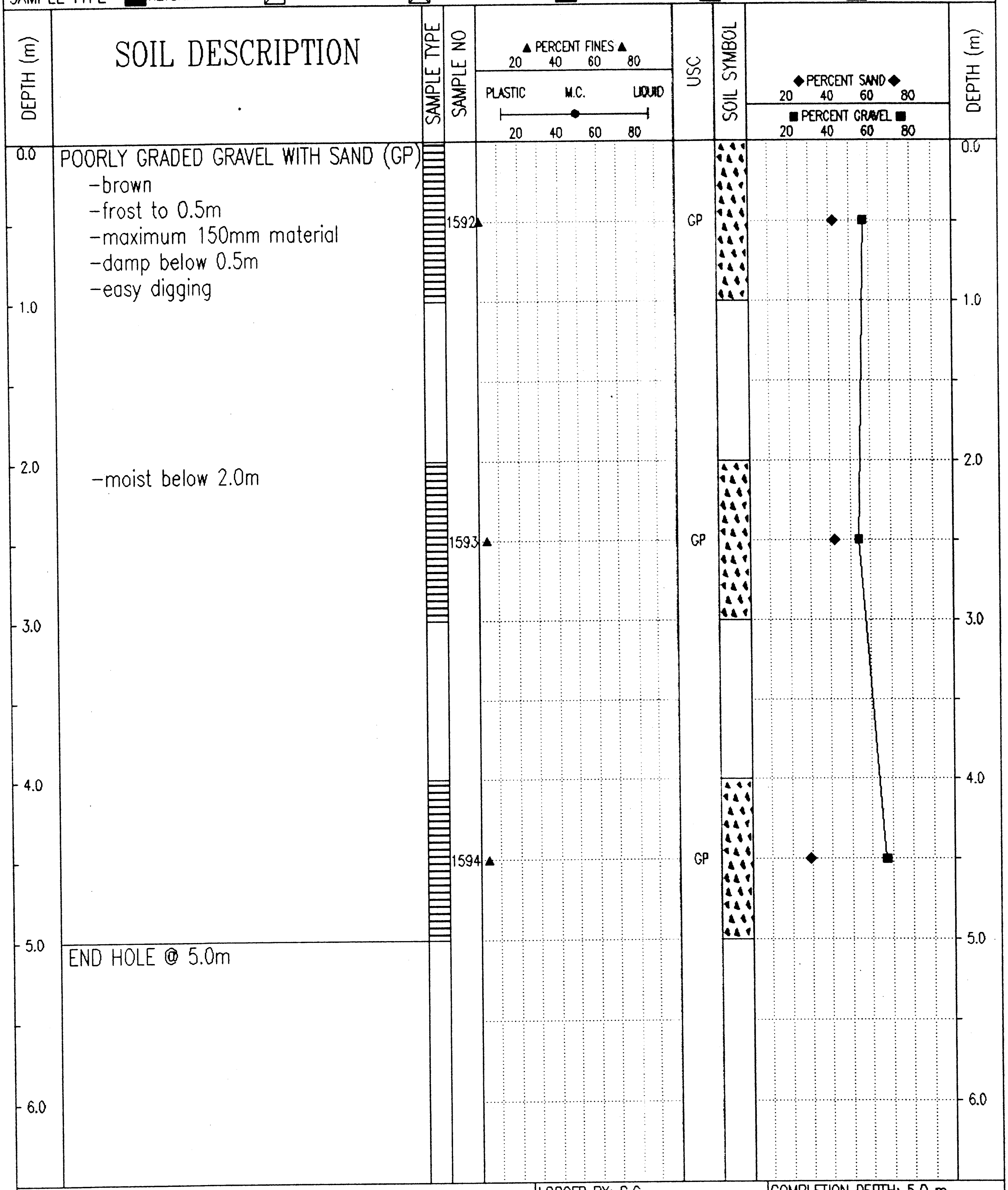
SUBSURFACE EXPLORATION & TESTING REPORT.	SHAKWAK SEG 11	TEST PIT NO: 630-1706
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
CAT 320L EXCAVATOR	LOCATION: 6788843N / 620185E	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



POORLY GRADED GRAVEL WITH SAND (GP)

- brown
- frost to 0.5m
- maximum 150mm material
- damp below 0.5m
- easy digging
- moist below 2.0m

END HOLE @ 5.0m

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 01/11/19
	Fig. No:	Page 1 of 1

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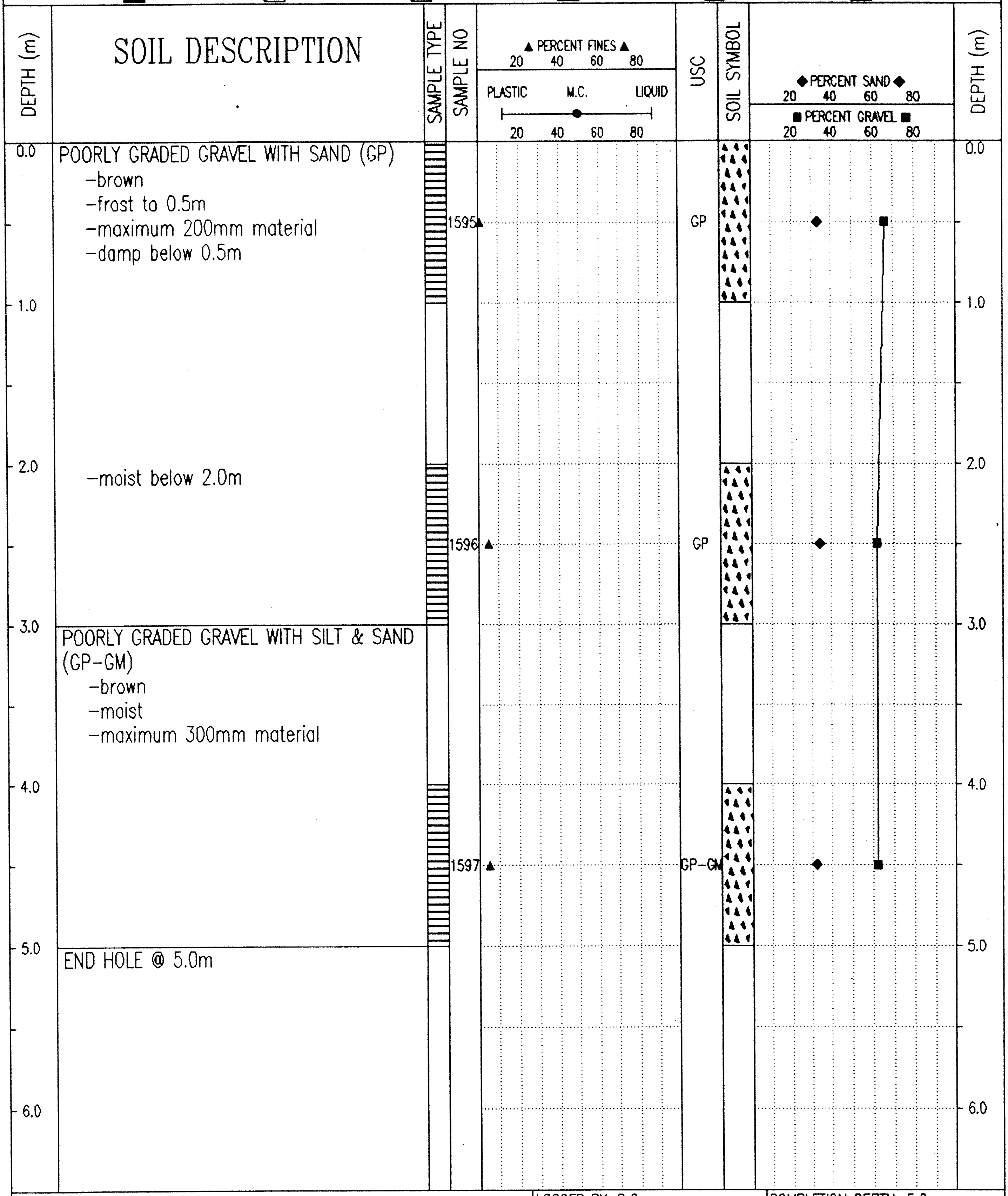
SUBSURFACE EXPLORATION & TESTING REPORT.	SHAKWAK SEG 11	TEST PIT NO: 630-1707
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
CAT 320L EXCAVATOR	LOCATION: 6788713N / 620090E	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



0.0 POORLY GRADED GRAVEL WITH SAND (GP)
- brown
- frost to 0.5m
- maximum 200mm material
- damp below 0.5m
- moist below 2.0m

3.0 POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)
- brown
- moist
- maximum 300mm material

5.0 END HOLE @ 5.0m

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 01/11/19
	Fig. No:	Page 1 of 1

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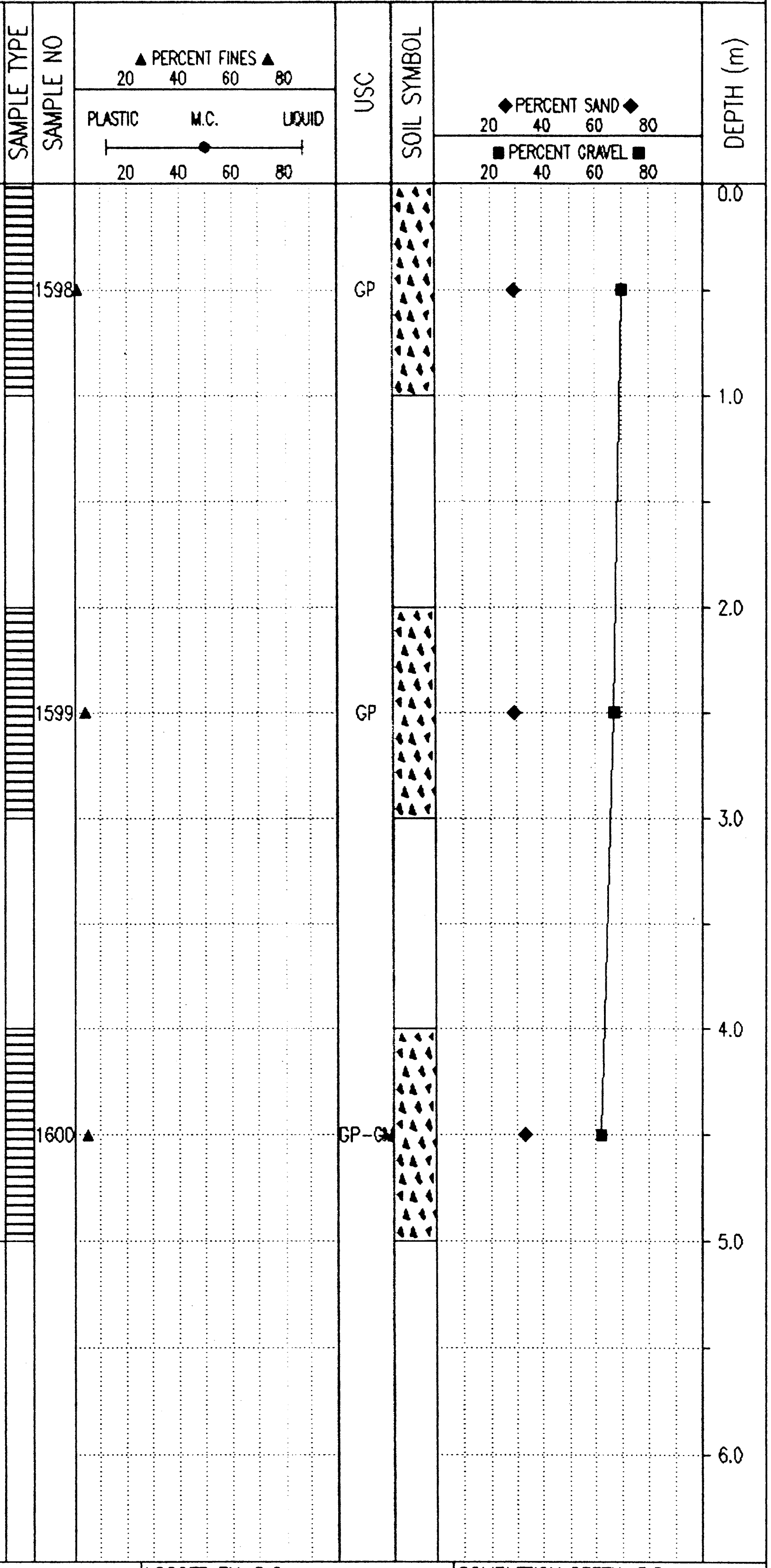
SUBSURFACE EXPLORATION & TESTING REPORT.	SHAKWAK SEG 11	TEST PIT NO: 630-1708
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
CAT 320L EXCAVATOR	LOCATION: 6788600N / 619943E	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▯ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	POORLY GRADED GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GP)-(GP-GM) -brown -frost to 0.5m -maximum 200mm material -damp below 0.5m
1.0	
2.0	-moist below 2.0m -maximum 250mm material below 2.0m
3.0	
4.0	
5.0	END HOLE @ 5.0m
6.0	



Government of Yukon
Transportation Engineering

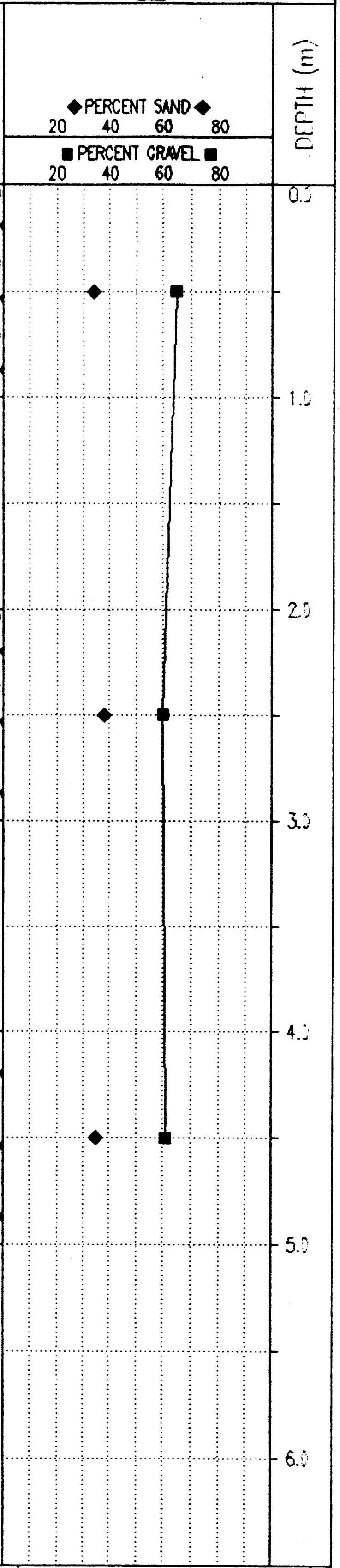
LOGGED BY: G.C.	COMPLETION DEPTH: 5.0 m
REVIEWED BY:	COMPLETE: 01/11/19
Fig. No:	Page 1 of 1

02/01/17 01:21PM

SUBSURFACE EXPLORATION & TESTING REPORT.	SHAKWAK SEG 11	TEST PIT NO: 630-1709
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
CAT 320L EXCAVATOR	LOCATION: 6788512N / 619768E	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ / PLASTIC M.C. LIQUID	USC	SOIL SYMBOL
0.0	POORLY GRADED GRAVEL WITH SAND (GP) -brown -frost to 0.5m -maximum 250mm material -damp below 0.5m	☰				
0.5		☰	1601	▲	GP	
2.0	-moist below 2.0m	☰				
2.5		☰	1602	▲	GP	
4.0		☰				
4.5		☰	1603	▲	GP	
5.0	END HOLE @ 5.0m					

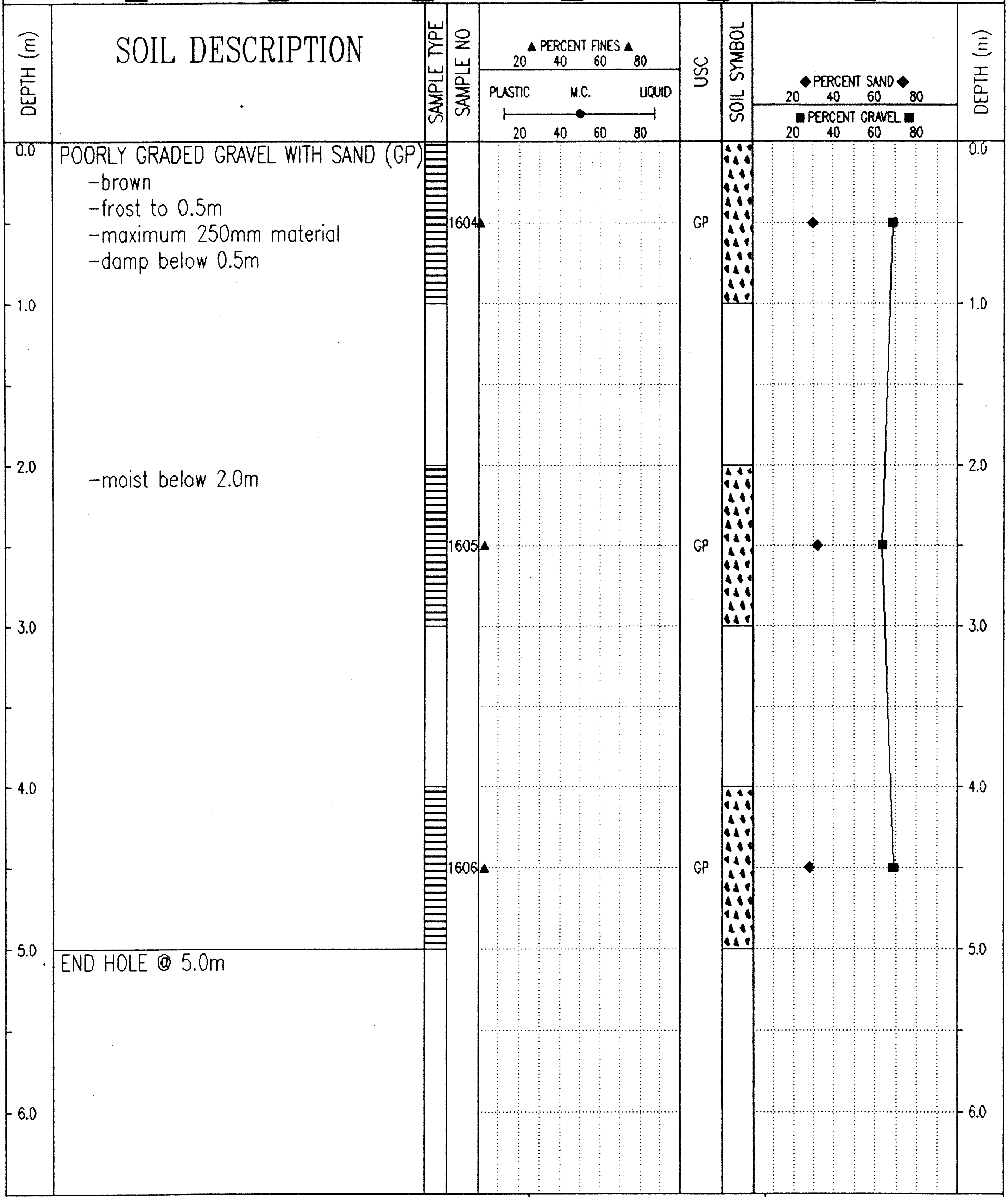


Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 01/11/19
	Fig. No:	Page 1 of 1

02/01/17 01:21PM

SUBSURFACE EXPLORATION & TESTING REPORT.	SHAKWAK SEG 11	TEST PIT NO: 630-1710
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
CAT 320L EXCAVATOR	LOCATION: 6788443N / 619629E	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



POORLY GRADED GRAVEL WITH SAND (GP)
- brown
- frost to 0.5m
- maximum 250mm material
- damp below 0.5m
- moist below 2.0m

END HOLE @ 5.0m

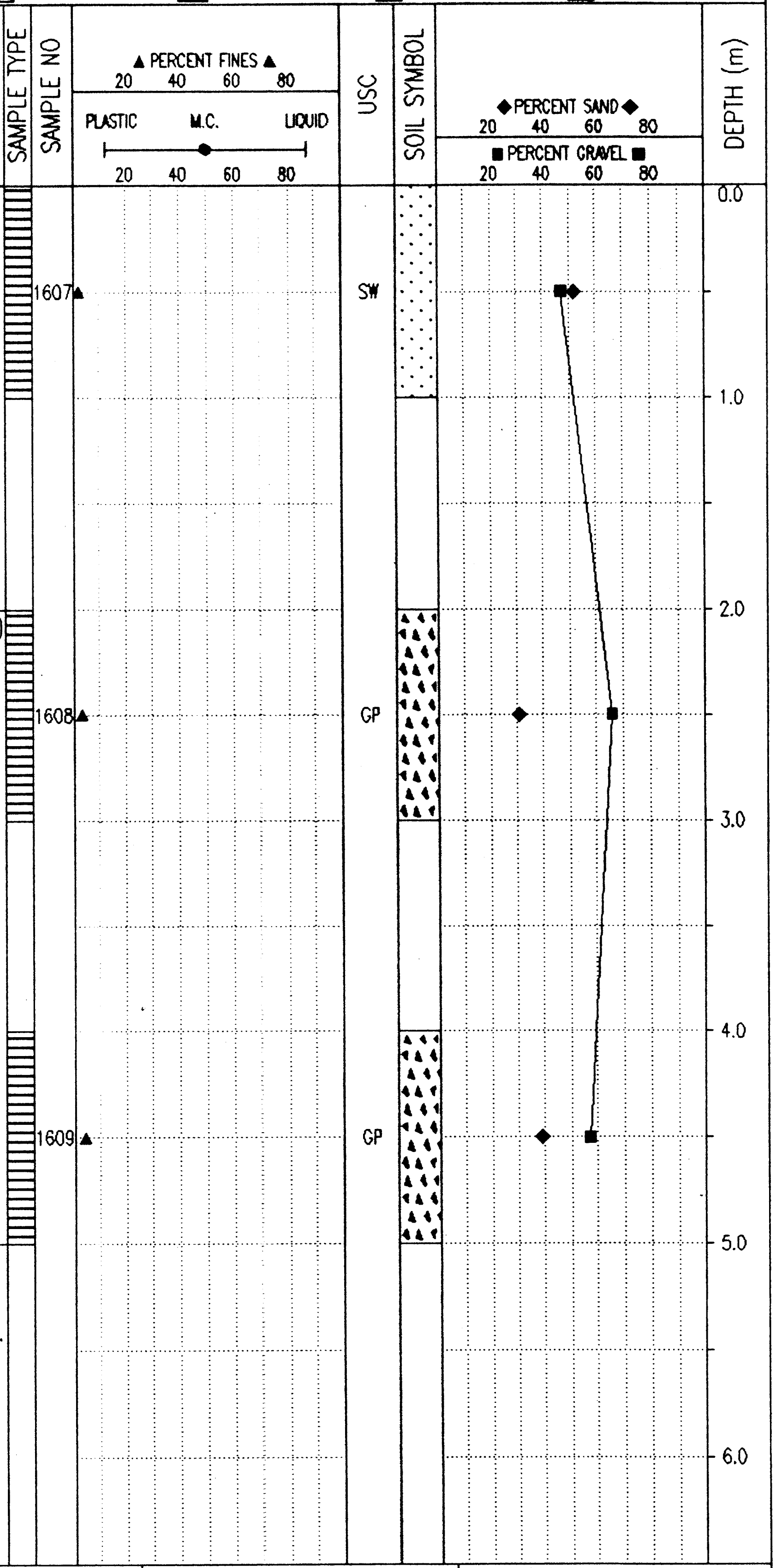
Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 01/11/19
	Fig. No:	Page 1 of 1

02/01/17 01:27PM

SUBSURFACE EXPLORATION & TESTING REPORT.	SHAKWAK SEG 11	TEST PIT NO: 630-1711
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
CAT 320L EXCAVATOR	LOCATION: 6789962N / 621010E	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ◫ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	WELL-GRADED SAND WITH GRAVEL (SW) -brown -frost to 0.5m -maximum 150mm material -damp below 0.5m
2.0	POORLY GRADED GRAVEL WITH SAND (GP) -brown -moist -maximum 200mm material
5.0	END HOLE @ 5.0m Note: No silt seam or water, Test hole downstream side of Hwy.



Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 01/11/19
	Fig. No:	Page 1 of 1

02/01/17 01:22PM

SUBSURFACE EXPLORATION & TESTING REPORT.	SHAKWAK SEG 11	TEST PIT NO: 630-1712
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
CAT 320L EXCAVATOR	LOCATION: 6790137N / 621115E	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ◫ CORE

DEPTH (m)

SOIL DESCRIPTION

0.0 POORLY GRADED GRAVEL WITH SAND (GP)
- -brown
- -frost to 0.5m
- -damp below 0.5m
- -maximum 150mm material

1.0

- -damp to moist below 1.2m
- -maximum 200mm material

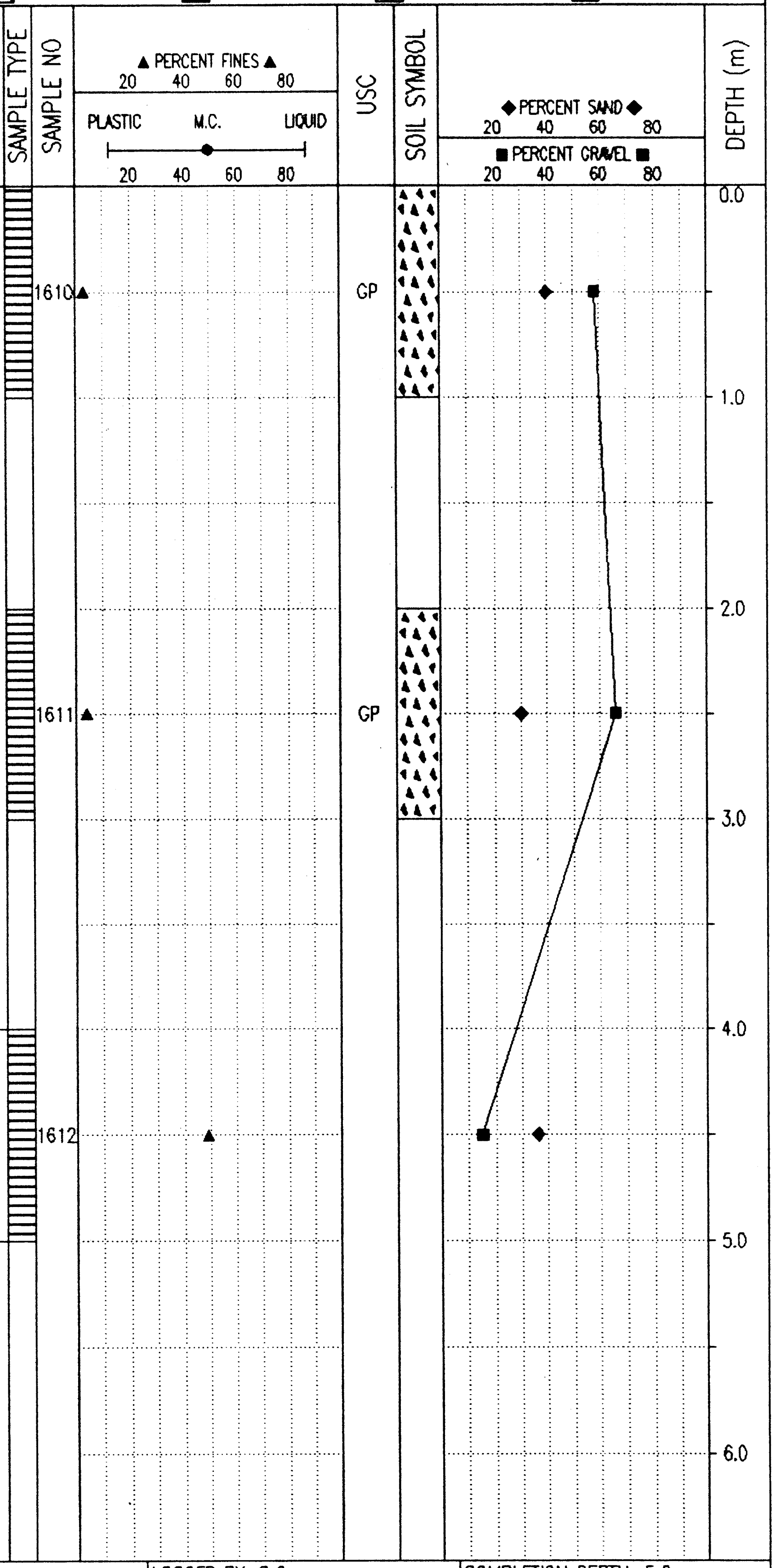
2.0

3.0

4.0 SILT WITH ORGANICS & ASH
- -brown
- -moist
- -sample 1612 tested (SM) but is not representative as sample contaminated by material above

5.0 END HOLE @ 5.m

6.0



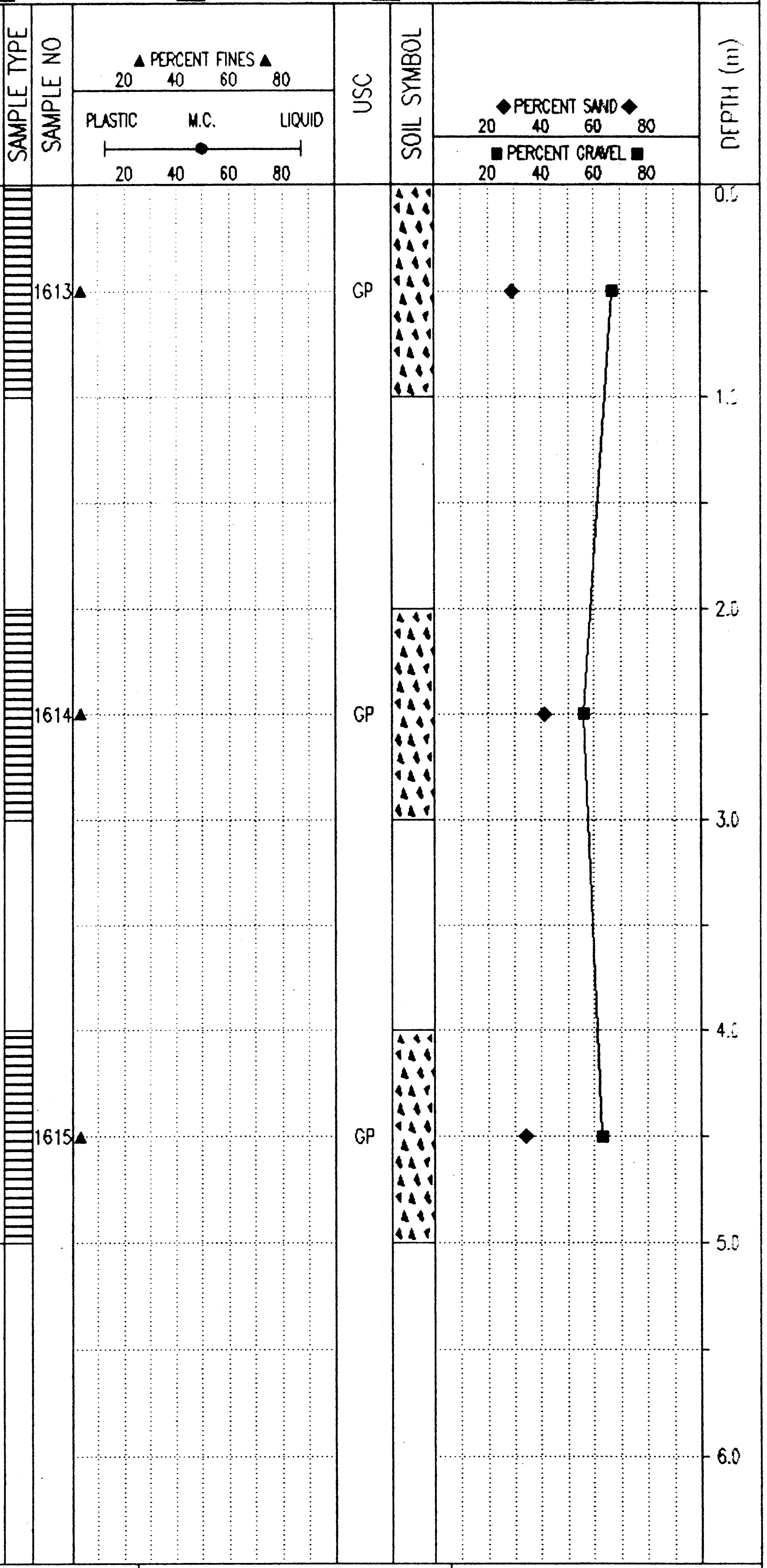
Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 01/11/19
	Fig. No:	Page 1 of 1

02/01/17 01:25PM

SUBSURFACE EXPLORATION & TESTING REPORT.	SHAKWAK SEG 11	TEST PIT NO: 630-1713
ENGINEERING CAPITAL	BOCK'S BROOK	Project No: 092-202101-0361
CAT 320L EXCAVATOR	LOCATION: 6790302N / 621234E	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	POORLY GRADED GRAVEL WITH SAND (GP) -brown -frost to 0.75m -damp below 0.75m -moist below 1.0m -maximum 150mm material below 1.0m
5.0	END HOLE @ 5.0m Note: No silt layer



Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 01/11/19
	Fig. No:	Page 1 of 1

02/01/17 01:26PM

Km 1738.8 LHS Alaska Highway
(Bocks Brook)

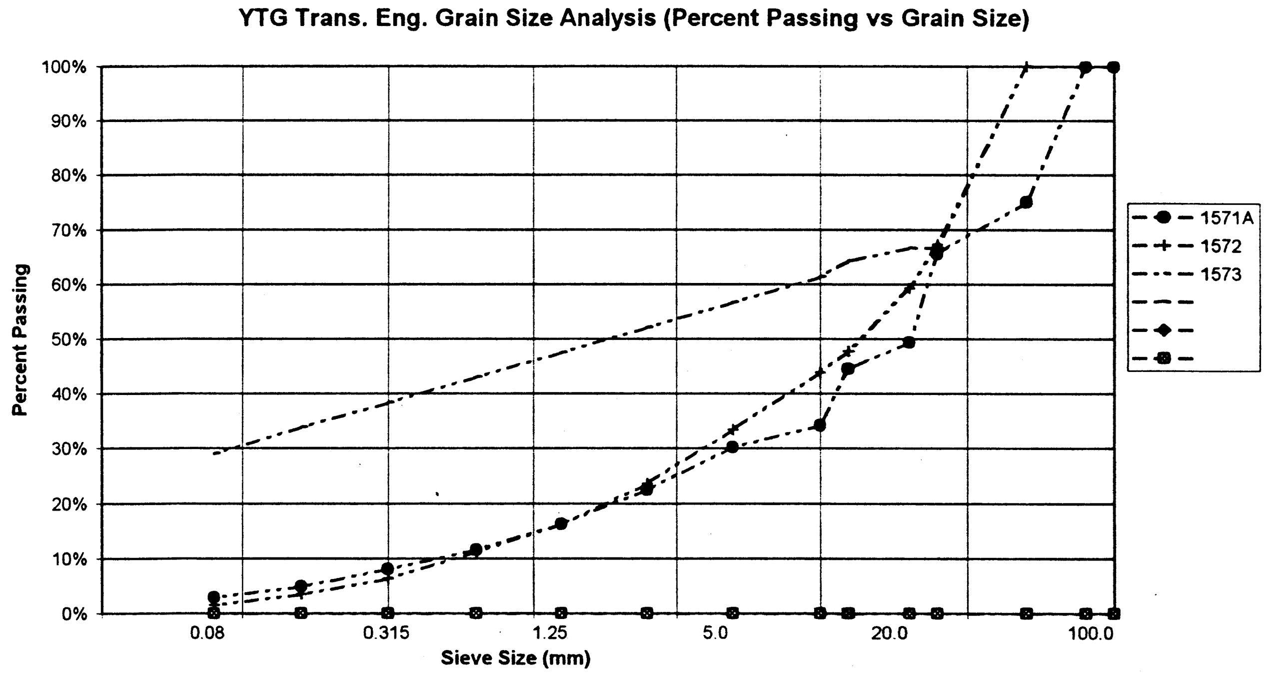
2001
Pit Run Sample Results

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: BOCKS BROOK
DRILL UNIT: CAT 320L EXCAVATOR
HOLE LOCATION: 620871E / 6789790N
LOGGED BY: G.C.

HOLE No.: 630-1699

DATE COMP: 2001/11/19

FIELD NO:	1571A	1572	1573			
LAB NO:	2461	2462	2463			
DEPTH:	0.5-1.0	2.0-3.0	4.0-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	75%	100%	100%			
25.0	66%	67%	67%			
20.0	49%	59%	67%			
12.5	45%	48%	64%			
10.0	34%	44%	61%			
5.0	30%	33%	57%			
2.5	22%	24%	52%			
1.25	16%	16%	48%			
0.630	12%	11%	43%			
0.315	8%	6%	38%			
0.160	5%	3%	34%			
0.080	3%	2%	29%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	70	67	43			
% SAND:	27	32	28			
% FINES:	3	2	29			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY GRAVEL WITH SAND (GM)			

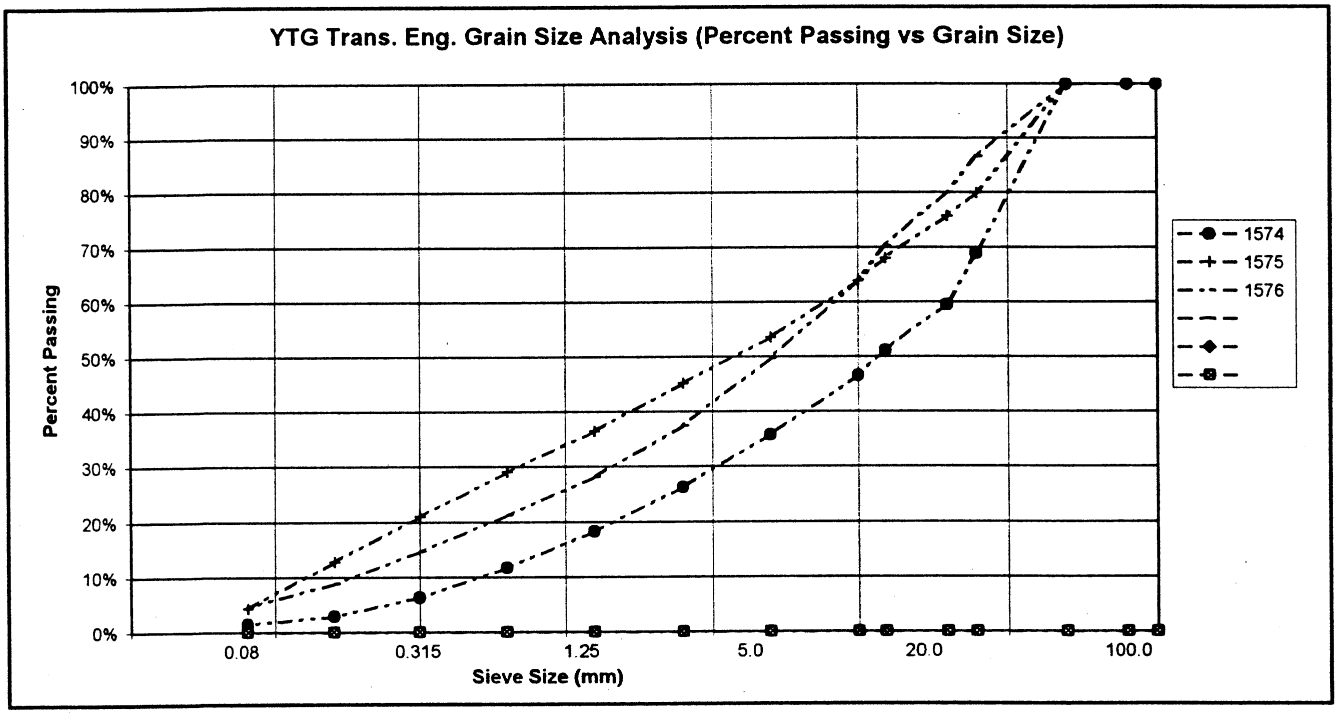


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: BOCKS BROOK
DRILL UNIT: CAT 320L EXCAVATOR
HOLE LOCATION: 620740E / 6789631N
LOGGED BY: G.C.

HOLE No.: 630-1700

DATE COMP: 2001/11/19

FIELD NO:	1574	1575	1576			
LAB NO:	2464	2465	2466			
DEPTH:	0.0-1.0	2.0-3.0	4.0-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	69%	80%	87%			
20.0	60%	76%	80%			
12.5	51%	68%	70%			
10.0	47%	64%	64%			
5.0	36%	53%	50%			
2.5	26%	45%	37%			
1.25	18%	37%	28%			
0.630	12%	29%	21%			
0.315	6%	21%	15%			
0.160	3%	13%	9%			
0.080	2%	4%	5%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	64	47	50			
% SAND:	34	49	45			
% FINES:	2	4	5			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED SAND WITH GRAVEL (SW)	POORLY GRADED GRAVEL WITH SAND (GP)			

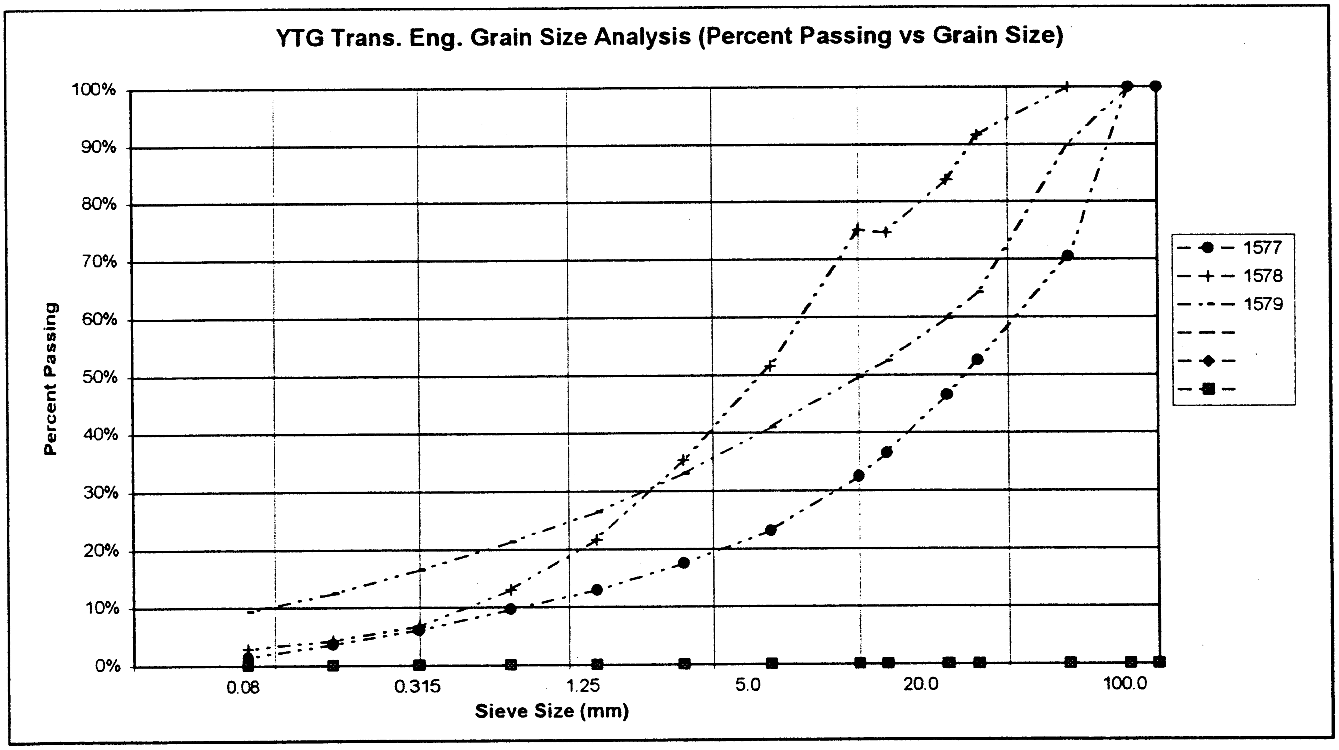

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: BOCKS BROOK
DRILL UNIT: CAT 320L EXCAVATOR
HOLE LOCATION: 620642E / 6789499N
LOGGED BY: G.C.

HOLE No.: 630-1701

DATE COMP: 2001/11/19

FIELD NO:	1577	1578	1579			
LAB NO:	2467	2468	2469			
DEPTH:	0.0-1.0	2.0-3.0	4.4-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	70%	100%	90%			
25.0	52%	92%	64%			
20.0	46%	84%	60%			
12.5	37%	75%	52%			
10.0	32%	75%	50%			
5.0	23%	52%	41%			
2.5	17%	35%	33%			
1.25	13%	22%	26%			
0.630	10%	13%	21%			
0.315	6%	7%	17%			
0.160	4%	4%	12%			
0.080	1%	3%	9%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	77	48	59			
% SAND:	22	49	32			
% FINES:	1	3	9			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED SAND WITH GRAVEL (SW)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			



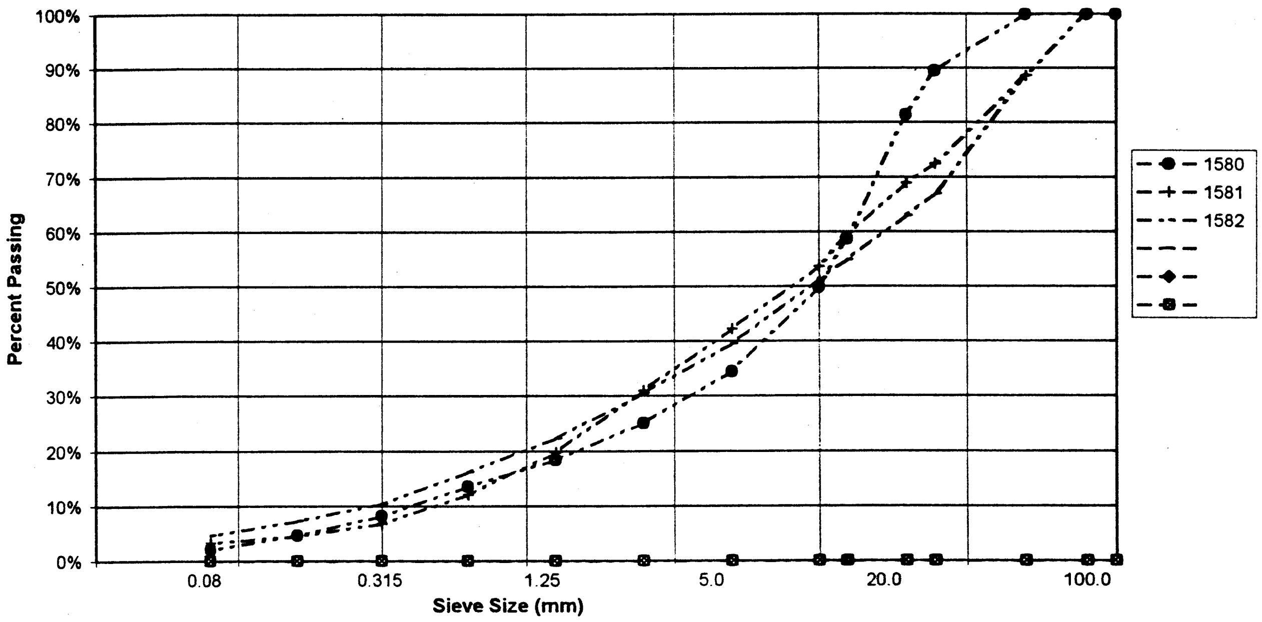
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: BOCKS BROOK
DRILL UNIT: CAT 320L EXCAVATOR
HOLE LOCATION: 620538E / 6789353N
LOGGED BY: G.C.

HOLE No.: 630-1702

DATE COMP: 2001/11/19

FIELD NO:	1580	1581	1582			
LAB NO:	2470	2471	2472			
DEPTH:	0.0-1.0	2.0-3.0	4.0-4.5			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	89%	89%			
25.0	90%	72%	67%			
20.0	81%	69%	63%			
12.5	59%	59%	55%			
10.0	50%	54%	51%			
5.0	34%	42%	40%			
2.5	25%	31%	31%			
1.25	18%	20%	22%			
0.630	14%	12%	16%			
0.315	8%	7%	10%			
0.160	5%	5%	7%			
0.080	2%	3%	5%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	66	58	60			
% SAND:	32	39	35			
% FINES:	2	3	5			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

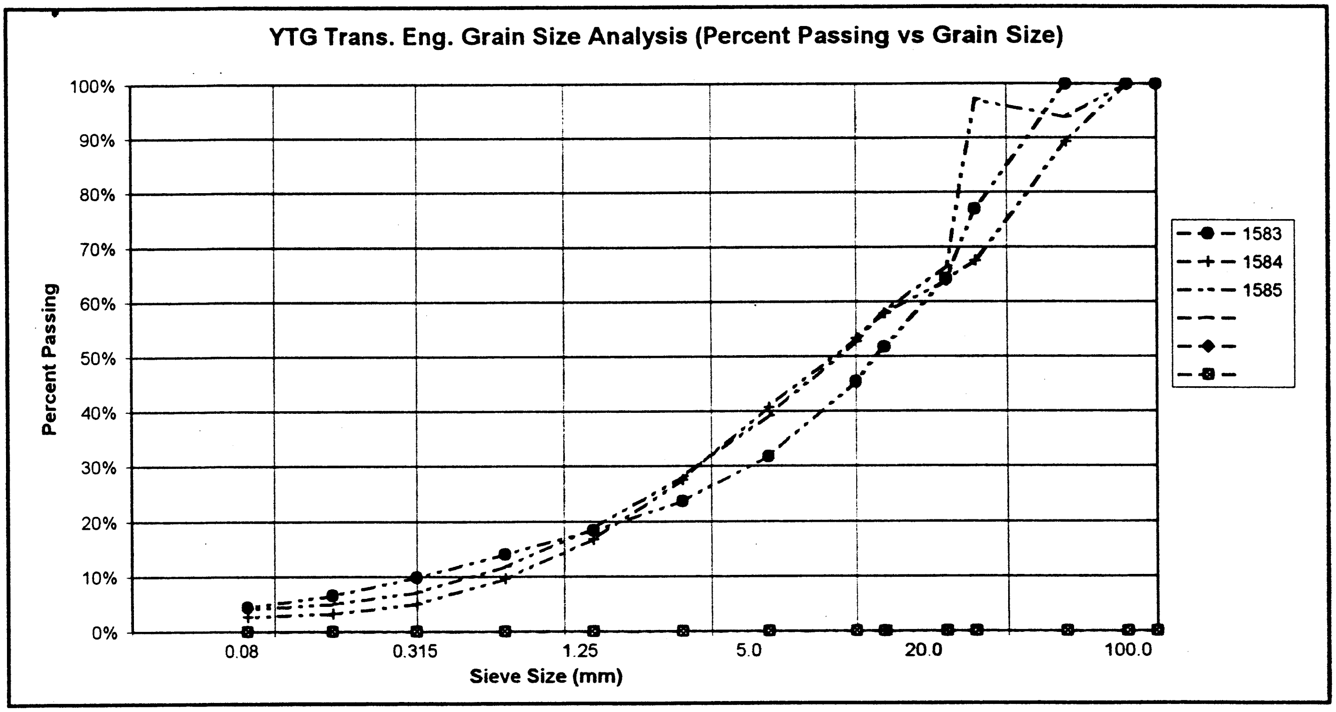


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: BOCKS BROOK
DRILL UNIT: CAT 320L EXCAVATOR
HOLE LOCATION: 620435E / 6789203N
LOGGED BY: G.C.

HOLE No.: 630-1703

DATE COMP: 2001/11/19

FIELD NO:	1583	1584	1585			
LAB NO:	2473	2474	2475			
DEPTH:	0.0-1.0	2.0-3.0	4.0-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	89%	94%			
25.0	77%	67%	97%			
20.0	64%	64%	66%			
12.5	52%	58%	58%			
10.0	45%	53%	53%			
5.0	32%	41%	39%			
2.5	24%	28%	28%			
1.25	18%	17%	19%			
0.630	14%	10%	12%			
0.315	10%	5%	7%			
0.160	7%	3%	5%			
0.080	4%	3%	4%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	68	59	61			
% SAND:	27	38	35			
% FINES:	4	3	4			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			

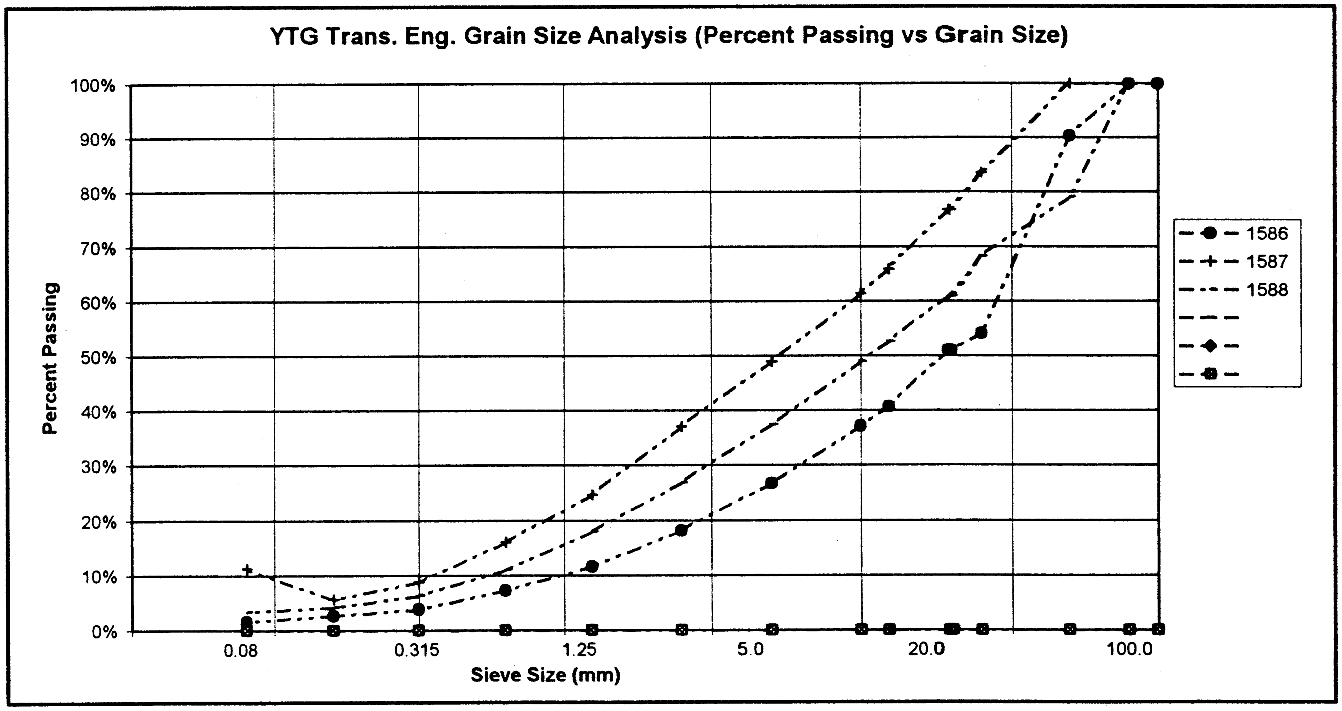


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: BOCKS BROOK
DRILL UNIT: CAT 320L EXCAVATOR
HOLE LOCATION: 620362E / 6789113N
LOGGED BY: G.C.

HOLE No.: 630-1704

DATE COMP: 2001/11/19

FIELD NO:	1586	1587	1588			
LAB NO:	2476	2477	2478			
DEPTH:	0.0-1.0	2.0-3.0	4.0-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	90%	100%	79%			
25.0	54%	84%	68%			
20.0	51%	77%	61%			
12.5	41%	66%	53%			
10.0	37%	61%	49%			
5.0	27%	49%	37%			
2.5	18%	37%	27%			
1.25	12%	25%	18%			
0.630	7%	16%	11%			
0.315	4%	9%	6%			
0.160	3%	6%	4%			
0.080	2%	11%	3%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	73	51	63			
% SAND:	25	38	34			
% FINES:	2	11	3			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)			

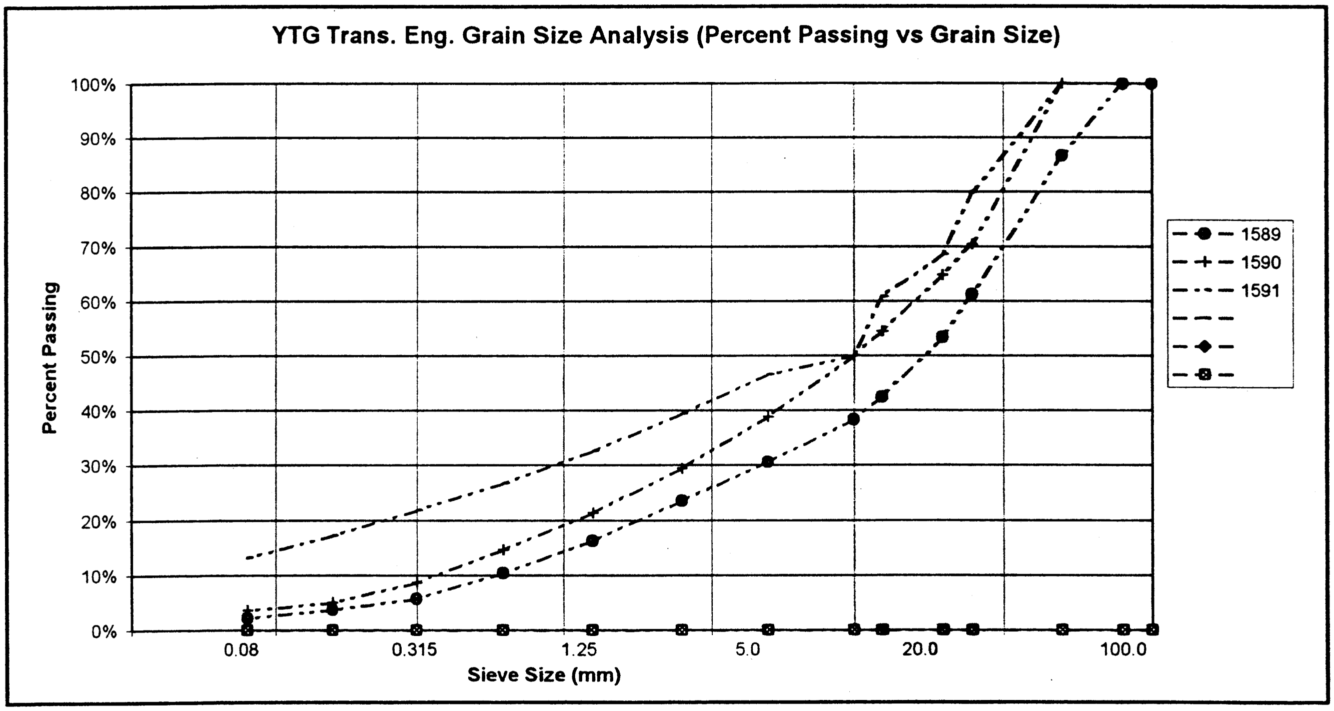


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: BOCKS BROOK
DRILL UNIT: CAT 320L EXCAVATOR
HOLE LOCATION: 620275E / 6788960N
LOGGED BY: G.C.

HOLE No.: 630-1705

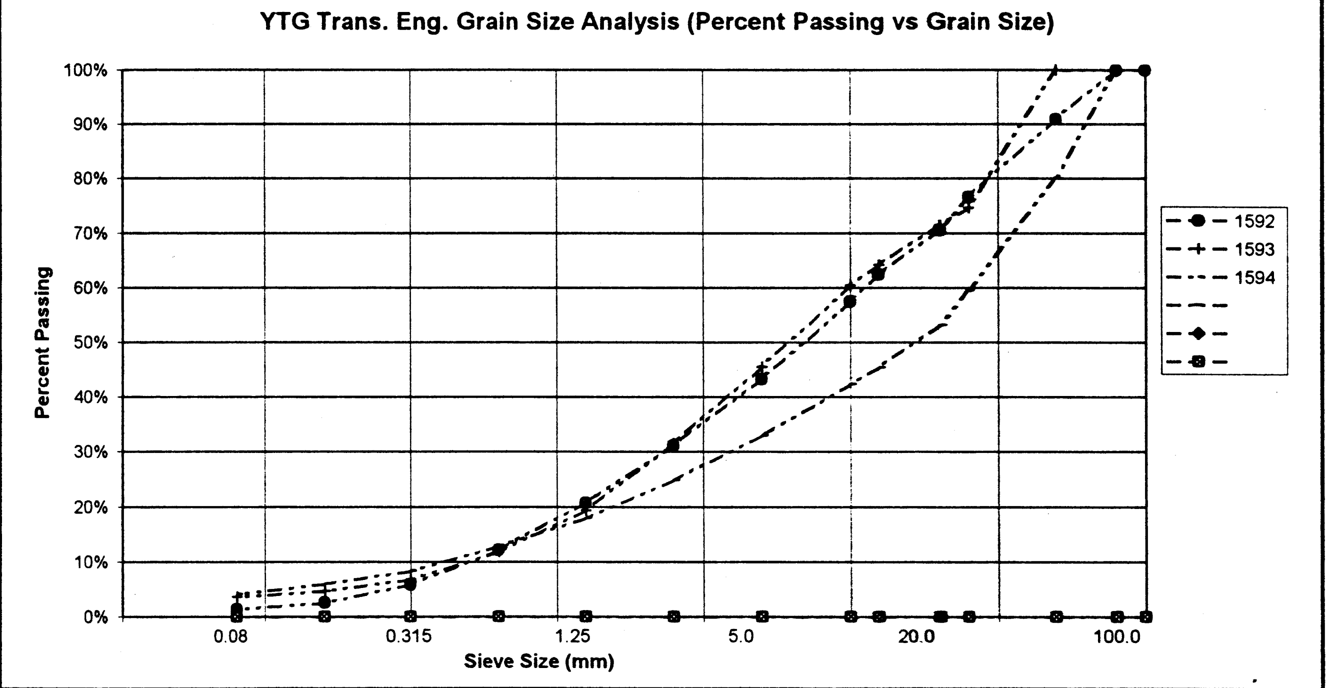
DATE COMP: 2001/11/19

FIELD NO:	1589	1590	1591			
LAB NO:	2479	2480	2481			
DEPTH:	0.0-1.0	2.0-3.0	4.4-4.5			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	87%	100%	100%			
25.0	61%	70%	80%			
20.0	53%	65%	69%			
12.5	42%	54%	61%			
10.0	38%	50%	50%			
5.0	31%	39%	47%			
2.5	24%	29%	39%			
1.25	16%	21%	33%			
0.630	10%	15%	27%			
0.315	6%	9%	22%			
0.160	4%	5%	17%			
0.080	2%	4%	13%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	69	61	53			
% SAND:	28	35	33			
% FINES:	2	4	13			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY GRAVEL WITH SAND (GM)			


YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER:	092-202101-0361-1	HOLE No.: 630-1706
CLIENT:	ENGINEERING CAPITAL	
PROJECT NAME:	SHAKWAK SEG 11	
PROJECT LOCATION:	BOCKS BROOK	
DRILL UNIT:	CAT 320L EXCAVATOR	
HOLE LOCATION:	620185E / 6788843N	
LOGGED BY:	G.C.	DATE COMP: 2001/11/19

FIELD NO:	1592	1593	1594			
LAB NO:	2482	2483	2484			
DEPTH:	0.0-1.0	2.0-3.0	4.0-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	91%	100%	80%			
25.0	77%	75%	59%			
20.0	71%	71%	53%			
12.5	62%	64%	45%			
10.0	57%	60%	42%			
5.0	43%	46%	33%			
2.5	31%	32%	25%			
1.25	21%	19%	18%			
0.630	12%	12%	13%			
0.315	6%	7%	8%			
0.160	3%	5%	6%			
0.080	1%	4%	4%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	57	54	67			
% SAND:	42	42	29			
% FINES:	1	4	4			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			

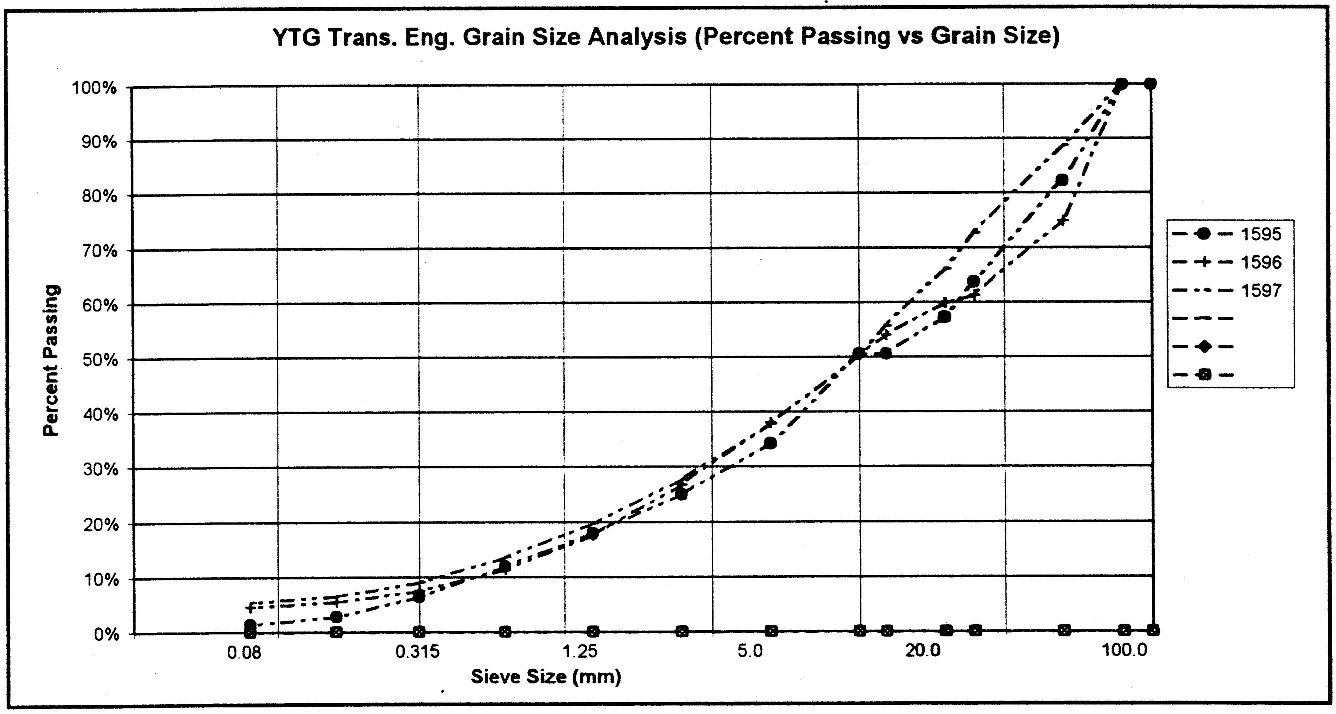


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: BOCKS BROOK
DRILL UNIT: CAT 320L EXCAVATOR
HOLE LOCATION: 620090E / 6788713N
LOGGED BY: G.C.

HOLE No.: 630-1707

DATE COMP: 2001/11/20

FIELD NO:	1595	1596	1597			
LAB NO:	2485	2486	2487			
DEPTH:	0.0-1.0	2.0-3.0	4.0-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	82%	75%	89%			
25.0	64%	61%	73%			
20.0	57%	60%	66%			
12.5	51%	54%	56%			
10.0	51%	50%	50%			
5.0	34%	38%	38%			
2.5	25%	27%	28%			
1.25	18%	18%	20%			
0.630	12%	11%	14%			
0.315	6%	7%	9%			
0.160	3%	6%	7%			
0.080	1%	5%	5%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	66	62	62			
% SAND:	33	34	32			
% FINES:	1	5	5			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			

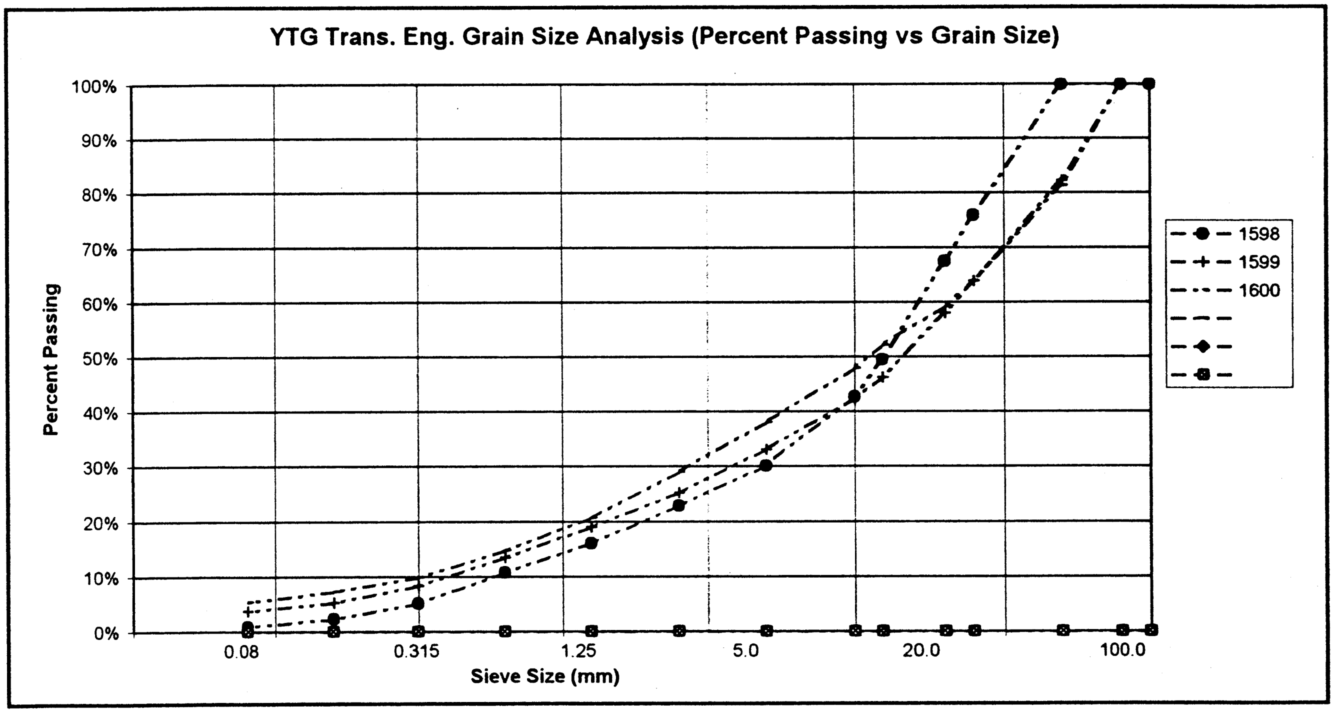


HOLE No.: 630-1708

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: BOCKS BROOK
DRILL UNIT: CAT 320L EXCAVATOR
HOLE LOCATION: 619943E / 6788600N
LOGGED BY: G.C.

DATE COMP: 2001/11/20

FIELD NO:	1598	1599	1600			
LAB NO:	2488	2489	2490			
DEPTH:	0.0-1.0	2.0-3.0	4.0-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	82%	81%			
25.0	76%	64%	64%			
20.0	67%	58%	59%			
12.5	50%	46%	52%			
10.0	43%	42%	48%			
5.0	30%	33%	38%			
2.5	23%	25%	29%			
1.25	16%	19%	21%			
0.630	11%	13%	15%			
0.315	5%	8%	10%			
0.160	2%	5%	7%			
0.080	1%	4%	5%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	70	67	62			
% SAND:	29	29	33			
% FINES:	1	4	5			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			

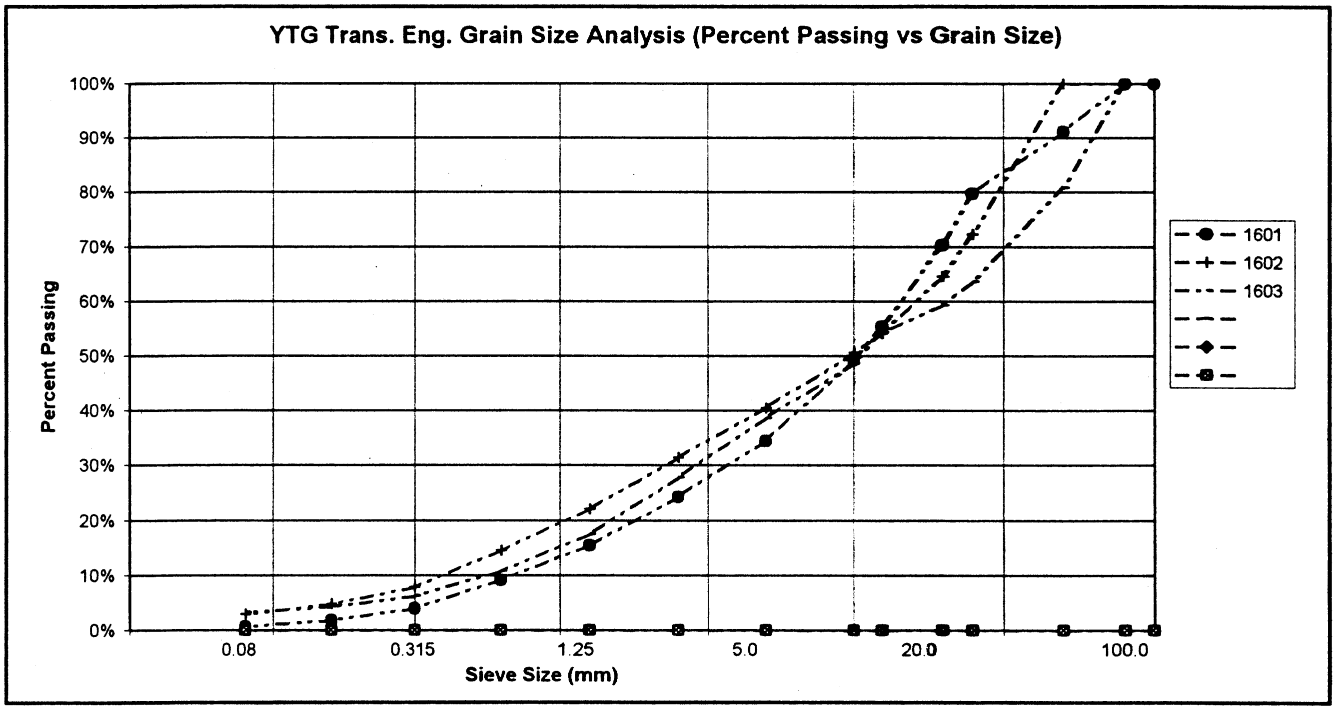


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: BOCKS BROOK
DRILL UNIT: CAT 320L EXCAVATOR
HOLE LOCATION: 619768E / 6788512 N
LOGGED BY: G.C.

HOLE No.: 630-1709

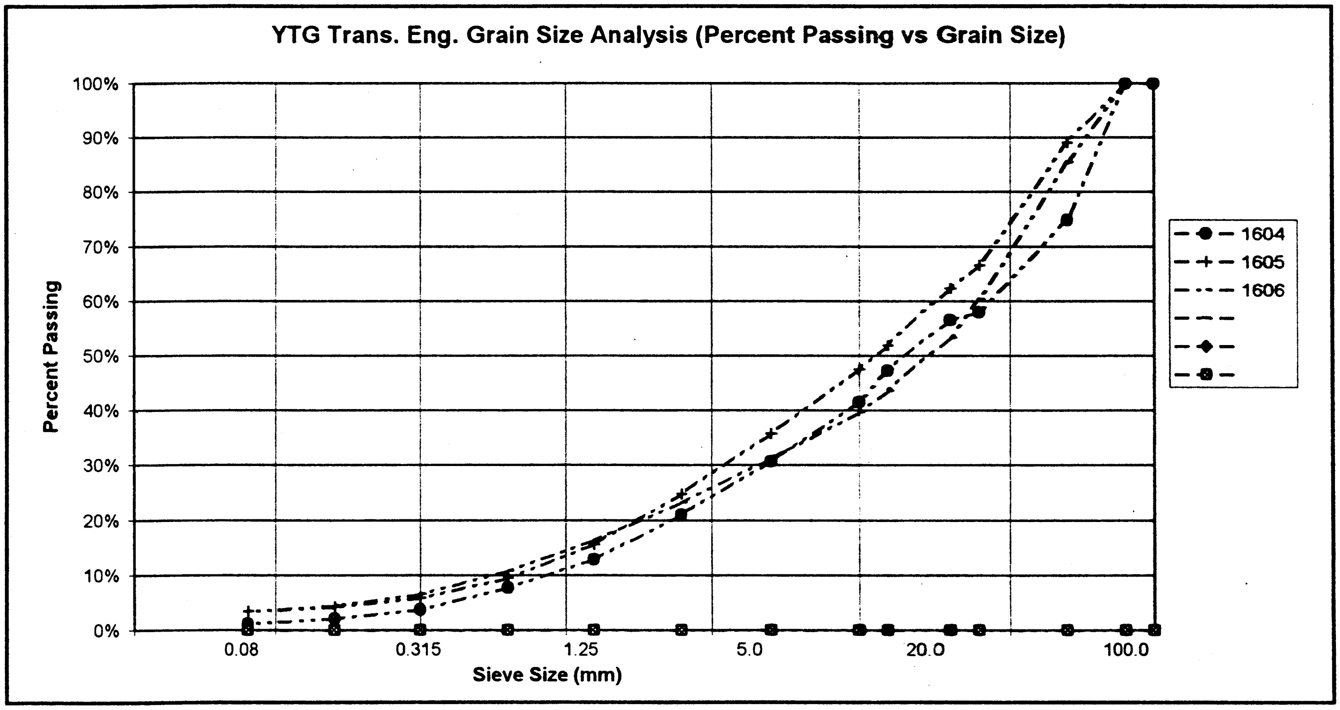
DATE COMP: 2001/11/20

FIELD NO:	1601	1602	1603			
LAB NO:	2491	2492	2493			
DEPTH:	0.0-1.0	2.0-3.0	4.0-5.0			
TYPE:	BULK	BULK	BULK	**BULK**		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	91%	100%	81%			
25.0	80%	72%	64%			
20.0	70%	65%	59%			
12.5	55%	54%	54%			
10.0	49%	51%	49%			
5.0	35%	40%	39%			
2.5	24%	31%	28%			
1.25	16%	22%	17%			
0.630	9%	15%	11%			
0.315	4%	8%	6%			
0.160	2%	5%	4%			
0.080	1%	3%	3%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	65	60	61			
% SAND:	34	38	35			
% FINES:	1	3	3			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			


YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
HOLE No.: 630-1710
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: BOCKS BROOK
DRILL UNIT: CAT 320L EXCAVATOR
HOLE LOCATION: 619629E / 6788443N
LOGGED BY: G.C.
DATE COMP: 2001/11/20

FIELD NO:	1604	1605	1606			
LAB NO:	2794	2495	2496			
DEPTH:	0.0-1.0	2.0-3.0	4.0-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	75%	89%	85%			
25.0	58%	67%	60%			
20.0	57%	62%	53%			
12.5	47%	52%	44%			
10.0	42%	48%	40%			
5.0	31%	36%	31%			
2.5	21%	25%	23%			
1.25	13%	16%	16%			
0.630	8%	10%	11%			
0.315	4%	6%	7%			
0.160	2%	4%	4%			
0.080	1%	3%	3%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	69	64	69			
% SAND:	30	32	28			
% FINES:	1	3	3			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			

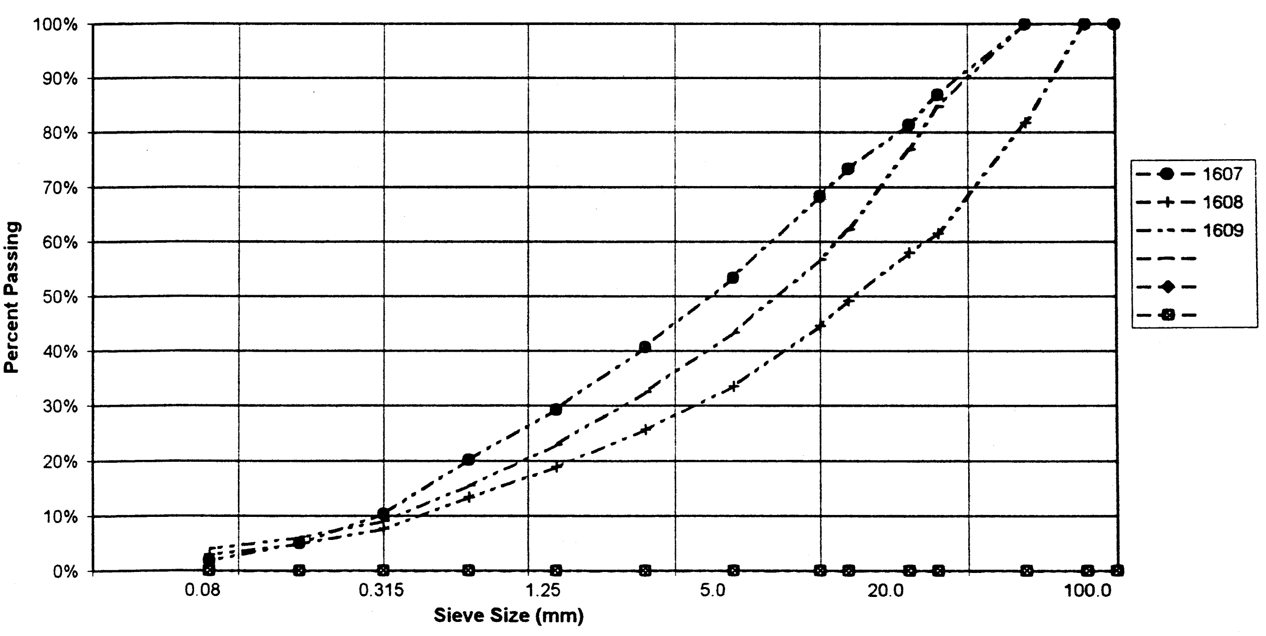


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: BOCKS BROOK
DRILL UNIT: CAT 320L EXCAVATOR
HOLE LOCATION: 621010E / 6789962N
LOGGED BY: G.C.

HOLE No.: 630-1711

DATE COMP: 2001/11/20

FIELD NO:	1607	1608	1609			
LAB NO:	2797	2498	2499			
DEPTH:	0.0-1.0	2.0-3.0	4.0-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	82%	100%			
25.0	87%	61%	85%			
20.0	81%	58%	77%			
12.5	73%	49%	62%			
10.0	68%	45%	57%			
5.0	53%	34%	43%			
2.5	41%	26%	33%			
1.25	29%	19%	23%			
0.630	20%	13%	16%			
0.315	10%	8%	9%			
0.160	5%	5%	6%			
0.080	2%	3%	4%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	47	66	57			
% SAND:	52	31	39			
% FINES:	2	3	4			
CLASSIFICATION	WELL-GRADED SAND WITH GRAVEL (SW)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			

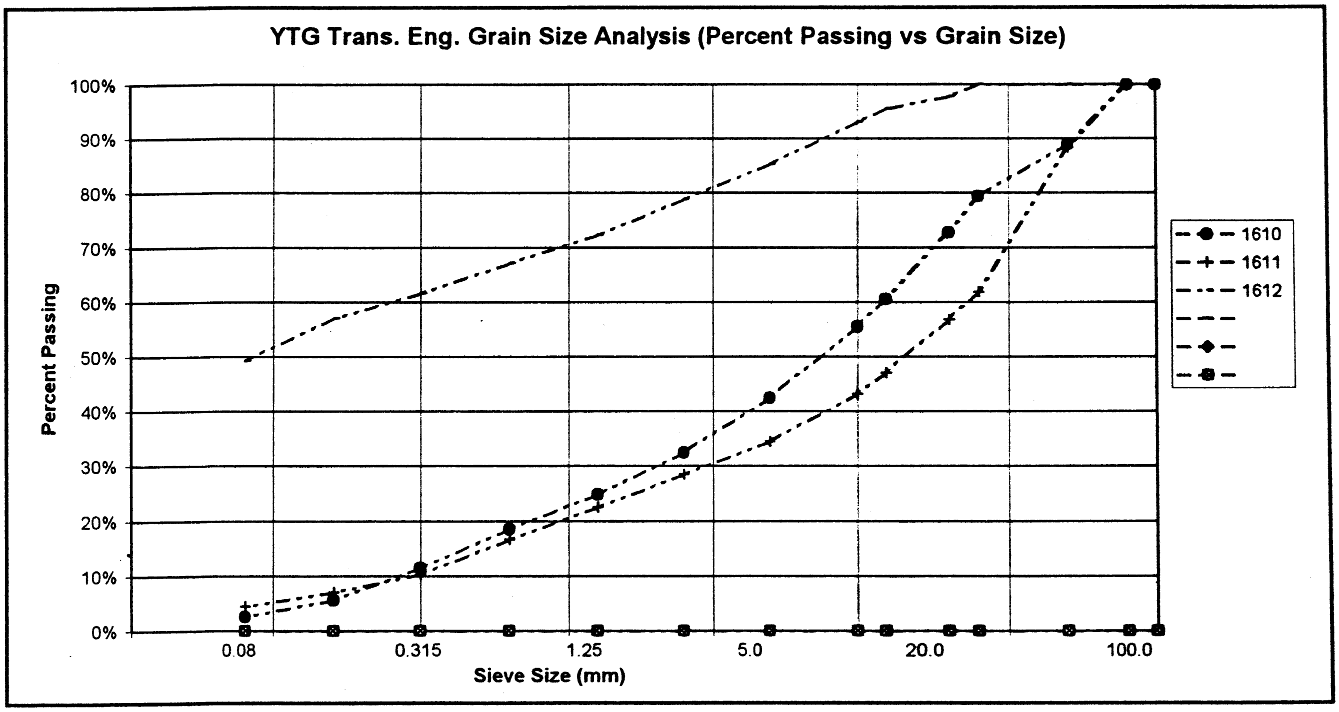


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: BOCKS BROOK
DRILL UNIT: CAT 320L EXCAVATOR
HOLE LOCATION: 621115E / 6790137N
LOGGED BY: G.C.

HOLE No.: 630-1712

DATE COMP: 2001/11/20

FIELD NO:	1610	1611	1612			
LAB NO:	2500	2501	2502			
DEPTH:	0.0-1.0	2.0-3.0	4.0-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	89%	88%	100%			
25.0	79%	62%	100%			
20.0	73%	57%	98%			
12.5	61%	47%	96%			
10.0	55%	43%	93%			
5.0	42%	34%	85%			
2.5	33%	29%	79%			
1.25	25%	23%	72%			
0.630	19%	17%	67%			
0.315	12%	10%	62%			
0.160	6%	7%	57%			
0.080	3%	4%	49%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	58	66	15			
% SAND:	40	30	36			
% FINES:	3	4	49			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY SAND (SM)			

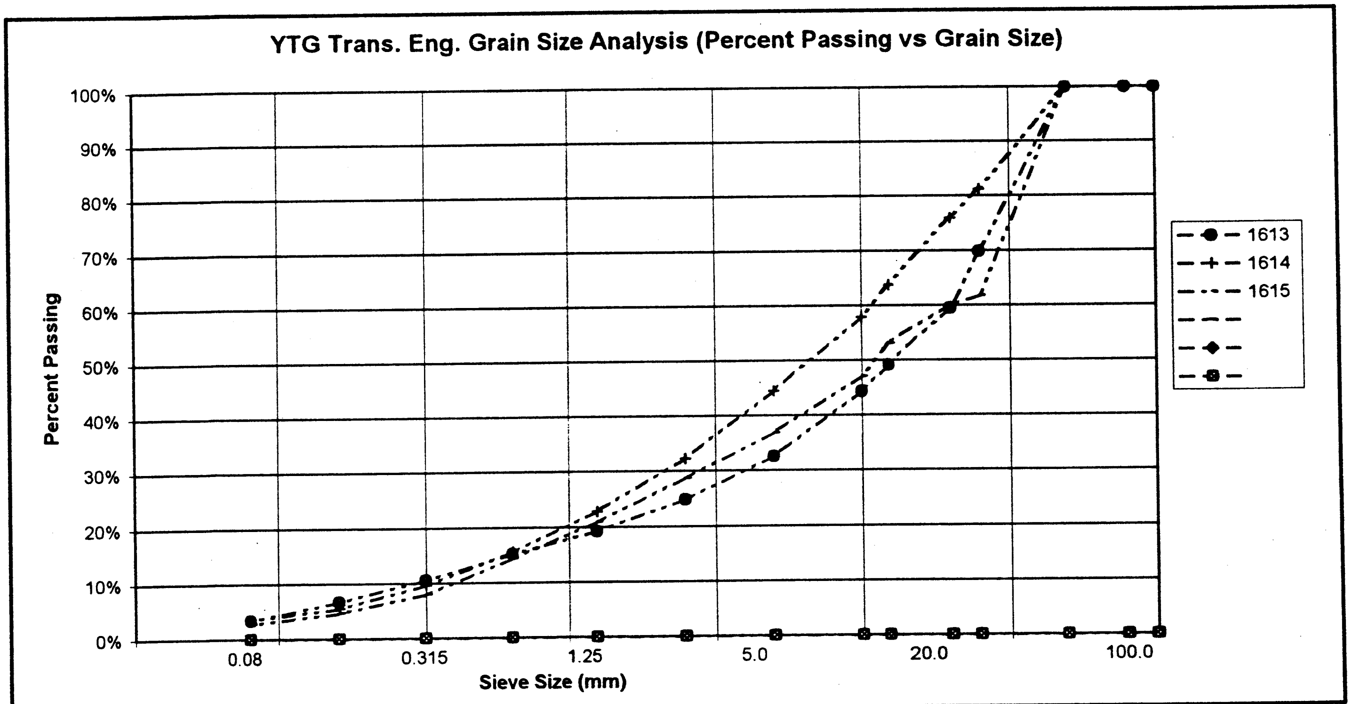


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: BOCKS BROOK
DRILL UNIT: CAT 320L EXCAVATOR
HOLE LOCATION: 621234E / 6790302N
LOGGED BY: G.C.

HOLE No.: 630-1713

DATE COMP: 2001/11/20

FIELD NO:	1613	1614	1615			
LAB NO:	2503	2504	2505			
DEPTH:	0.0-1.0	2.0-3.0	4.0-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	70%	81%	62%			
20.0	59%	76%	60%			
12.5	49%	64%	53%			
10.0	44%	58%	47%			
5.0	33%	44%	37%			
2.5	25%	32%	29%			
1.25	19%	23%	21%			
0.630	15%	16%	14%			
0.315	11%	10%	8%			
0.160	7%	6%	5%			
0.080	3%	3%	3%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	67	56	63			
% SAND:	29	41	34			
% FINES:	3	3	3			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			



GEOTECHNICAL INVESTIGATIONS

Highway Construction
Km 1738.3 to 1750.2 Highway #1
Yukon, 2002-2003
Volume 4 of 4

Yukon
Community and Transportation Services
Transportation Engineering Branch

Geotechnical Services

BOX 2703, WHITEHORSE, YUKON
PHONE 867-667-8820   FAX 867-393-6447

ORIGINAL - Do Not Remove From File

Highway Construction
Km 1738.3 to 1750.2
Alaska Highway #1
Yukon 2002-2003
Volume 4 of 4

This Data Package prepared for project viewing:

March, 2002

Transportation Engineering Branch
Geotechnical Services
461 Range Road
Whitehorse, Yukon

HIGHWAY CONSTRUCTION

GEOTECHNICAL INVESTIGATION
Km 1738.3 to 1750.2
YUKON 2002-2003

ALASKA HIGHWAY #1

CONTENTS

Volume 1 of 4

INTRODUCTION

Investigation notes, classification methods and legends.

CENTRELINE TESTING ALASKA HIGHWAY

Subsurface Exploration and Testing ReportSheets are provided.
The reports for the centreline holes are arranged according to project location, starting at Km 1775+500 and increasing to Km 1786+500.

TEST HOLES 1292 to 1326	shown with prefix 541-
TEST HOLES 1327 to 1333	shown with prefix 542-
TEST HOLES 1334 to 1369	shown with prefix 543-
TEST HOLES 1370 to 1400	shown with prefix 544-
TEST HOLES 287 to 332	shown with prefix 611-
TEST HOLES 333 to 353	shown with prefix 612-

NOTE:

Centreline Test Hole locations indicated on the Subsurface Exploration and Testing Report Sheets are approximate. Actual Test Hole locations, located by GPS survey or field survey, are as shown on project plans.

CONTENTS (continued)

Volume 2 of 4

CENTRELINE TESTING ALASKA HIGHWAY

Laboratory Testing Result Sheets are provided.
The reports for the centreline holes are arranged according to test hole number, starting at 541-1292 and increasing to 612-353.

TEST HOLES 1292 to 1326	shown with prefix 541-
TEST HOLES 1327 to 1333	shown with prefix 542-
TEST HOLES 1334 to 1369	shown with prefix 543-
TEST HOLES 1370 to 1400	shown with prefix 544-
TEST HOLES 287 to 332	shown with prefix 611-
TEST HOLES 333 to 353	shown with prefix 612-

NOTE:
Centreline Test Hole locations indicated on the Subsurface Exploration and Testing Report Sheets are approximate. Actual Test Hole locations, located by GPS survey or field survey, are as shown on project plans.

CONTENTS (continued)

Volume 3 of 4

GRANULAR SOURCE Km 1738.8 RHS & LHS ALASKA HIGHWAY

Location plans and subsurface exploration and testing report sheets are provided.

Auger Testing

2001	TEST HOLES 344 & 345	shown with prefix 612-
2001	TEST HOLES 1891 to 1904	shown with prefix 622-

Backhoe Testing

2001	TEST PITS 1699 to 1713	shown with prefix 630-

CONTENTS (continued)

Volume 4 of 4

GRANULAR SOURCE Km 1750.0 LHS ALASKA HIGHWAY

Location plans, photographs, and subsurface exploration and testing report sheets are provided.

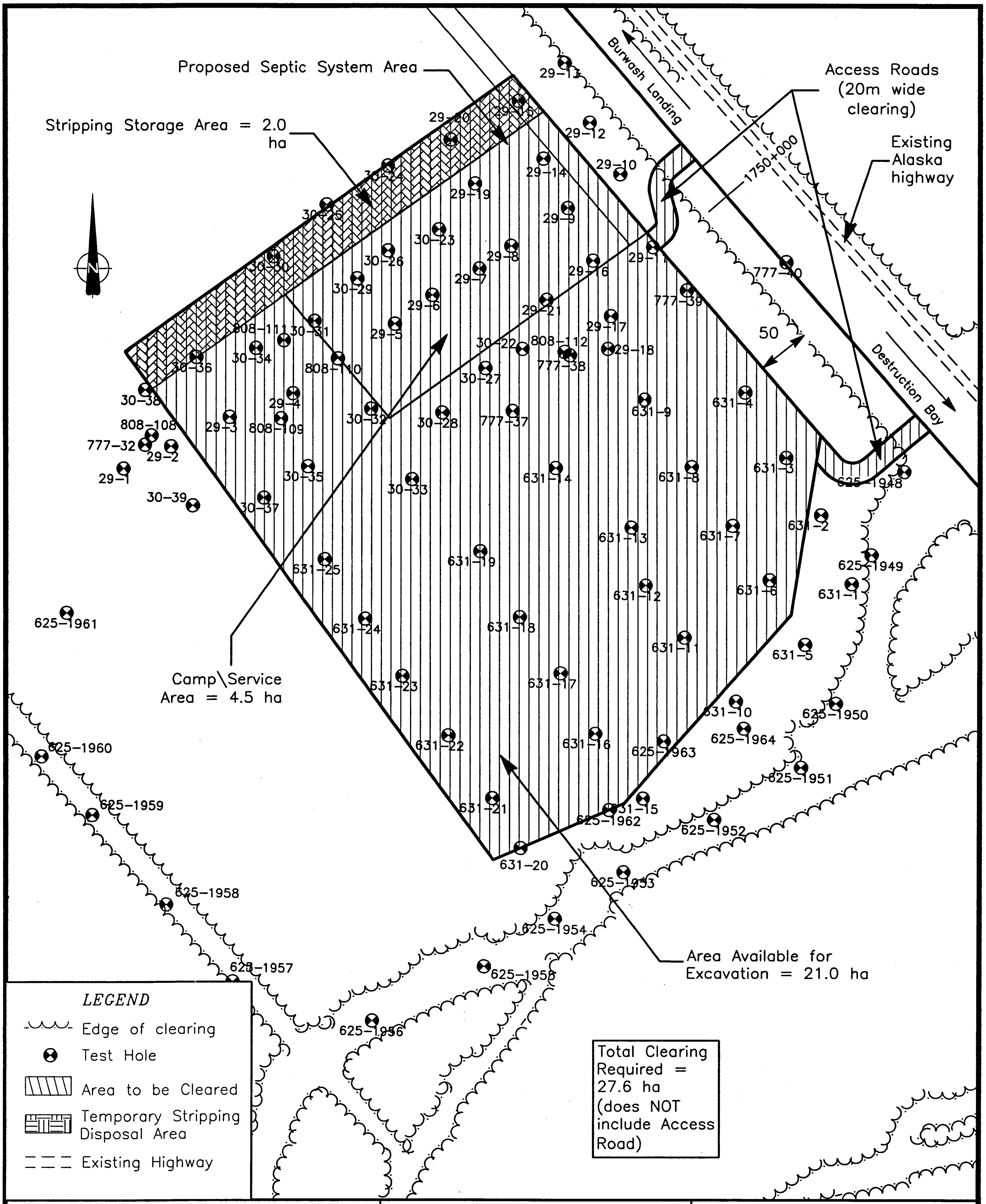
Auger Testing

1985	TEST HOLES 32 and 37 to 40	shown with prefix 777-
2001	TEST HOLES 1948 to 1964	shown with prefix 625-

Backhoe Testing

1985	TEST PITS 108 to 112	shown with prefix 808-
1988	TEST PITS 1 to 21	shown with prefix 029-
1988	TEST PITS 22 to 39	shown with prefix 030-
2002	TEST PITS 1 to 25	shown with prefix 631-

GRANULAR SOURCE TESTING
Km 1750.0 LHS
ALASKA HIGHWAY



Yukon
Infrastructure

Transportation Engineering Branch

SITE PLAN
CAMP/SERVICE & GRANULAR
BORROW SOURCE
km 1750, LEWIS CREEK
ALASKA HWY., YUKON

designed: B. STANLEY
drawn: KLJ
app'd:
date: 2002-04-03
scale: 1:5,000
drwg: 011750SP

Pit 115 G-04
Km 1750 LHS Alaska Highway

1985
Test Hole Logs

Public Works Canada

WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT 777-32

PROJECT/SECTION

HOLE No. ~~85-52~~

HOLE LOCATION

ELEV.

DEPTH TO G.W.L.

DATE DRILLED 85-05-31

DRILL UNIT B30 6" AUGER

TECHNICIAN D.S.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASS. or G.W.L.	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm	O – % MOISTURE CONTENT X – % < .074 mm PLASTIC LIMIT ⊢⊣ LIQUID LIMIT 0 10 20 30 40 50 60 70 80 90 100
1	WELL-GRADED GRAVEL WITH SAND -GREY		A/P	97	224	GW	60.3	35.8	—		⊙ x NP
2	ROCKY - SLOW DRILLING										
	WELL-GRADED GRAVEL -GREY		A/P	98	225	GW	83.4	14.2	—		⊙ x NP
3	WELL-GRADED GRAVEL WITH SILT AND SAND -GREY		A/P	99	226	GW-GM	57.6	36.6	—		⊙ x NP
	REFUSAL										
4											
5											
6											
7											
8											
9											
10											

Public Works
Canada

WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT 777-37

PROJECT/SECTION		HOLE No.	~~85-37~~
HOLE LOCATION ,	ELEV.	DEPTH TO G.W.L.	
DATE DRILLED 85-05-31	DRILL UNIT B30 6" AUGER	TECHNICIAN	D.S.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASS. or G.W.L.	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm	O – % MOISTURE CONTENT X – % < .074mm PLASTIC LIMIT ├─┤ LIQUID LIMIT
1			A/P	112	239	[illegible]					
2	POORLY GRADED GRAVEL WITH SAND -DK. GREY										
			A/P	113	240	GP	74.4	21.6	—		O X NP
3	— — — — — —										
4	WELL-GRADED GRAVEL WITH SAND		A/P	114	241	GW	61.2	34.1	—		O X NP
5	-DK. GREY										
			A/P	115	242	NO SAMPLE					
6	END HOLE										
7											
8											
9											
10											

0 10 20 30 40 50 60 70 80 90 100

Public Works Canada

WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT 777-38

PROJECT/SECTION	HOLE No. ~~85-38~~
HOLE LOCATION	ELEV.
	DEPTH TO G.W.L.
DATE DRILLED 85-05-31	DRILL UNIT B30 - 6" AUGER
	TECHNICIAN D.S.

SAMPLE DATA

0 – % MOISTURE CONTENT
x – % < .074 mm
PLASTIC LIMIT ⊢⊣ LIQUID LIMIT

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASS. or G.W.L.	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm	0 10 20 30 40 50 60 70 80 90 100
1	SILTY SAND WITH GRAVEL - BLACK		A/P	116	242A	SM	36.4	50.5	—		⊙ × NP
2	WELL-GRADED GRAVEL WITH SILT AND SAND - BROWN		A/P	117	243	GW-GM	56.0	41.2	—		⊙ × NP
3–4	SILTY SAND WITH GRAVEL - BROWN		A/P	118	244	SM	36.6	48.1	—		⊙ × NP
	END HOLE										

Public Works Canada

WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT 777-39

PROJECT/SECTION

HOLE No. ~~85-39~~

HOLE LOCATION

ELEV.

DEPTH TO G.W.L.

DATE DRILLED 85-05-31

DRILL UNIT B30 - 6"AUGER

TECHNICIAN D.S.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASS. or G.W.L.	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm	O – % MOISTURE CONTENT X – % < .074 mm PLASTIC LIMIT ├─┤ LIQUID LIMIT 0 10 20 30 40 50 60 70 80 90 100
1	WELL-GRADED GRAVEL WITH SAND		A|P	119	245	GW	65.5	30.3	—		⊙ x NP
	- BROWN										
2	- DK. GREY		A|P	120	246	GW	62.8	32.2	—		⊙ x NP
3											
4	WELL-GRADED GRAVEL WITH SILT AND SAND - DK. GREY		A|P	121	247	GW-GM	60.6	34.3	—		⊙ x NP
	END HOLE										
5											
6											
7											
8											
9											
10											

Public Works Canada

WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT 777-40

PROJECT/SECTION		**HOLE No.** ~~85-40~~
HOLE LOCATION	**ELEV.**	**DEPTH TO G.W.L.**
DATE DRILLED 85-05-31	**DRILL UNIT** 630 - 6" AUGER	**TECHNICIAN** D.S.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASS. or G.W.L.	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm	O - % MOISTURE CONTENT X - % < .074 mm PLASTIC LIMIT ⊢⊣ LIQUID LIMIT
1	WELL-GRADED SAND WITH SILT AND GRAVEL -DK. GREY		A/P	122	248	SW-SM	45.1	45.8	—		O X NP
2	WELL-GRADED GRAVEL WITH SILT AND SAND -DK. GREY		A/P	123	249	GW-GM	59.7	34.6	—		O X NP
4	WELL GRADED SAND WITH SILT AND GRAVEL -DK. GREY		A/P	124	250	SW-SM	41.9	48.5	—		O X NP
	END HOLE										

0 10 20 30 40 50 60 70 80 90 100

Pit 115 G-04
Km 1750 LHS Alaska Highway

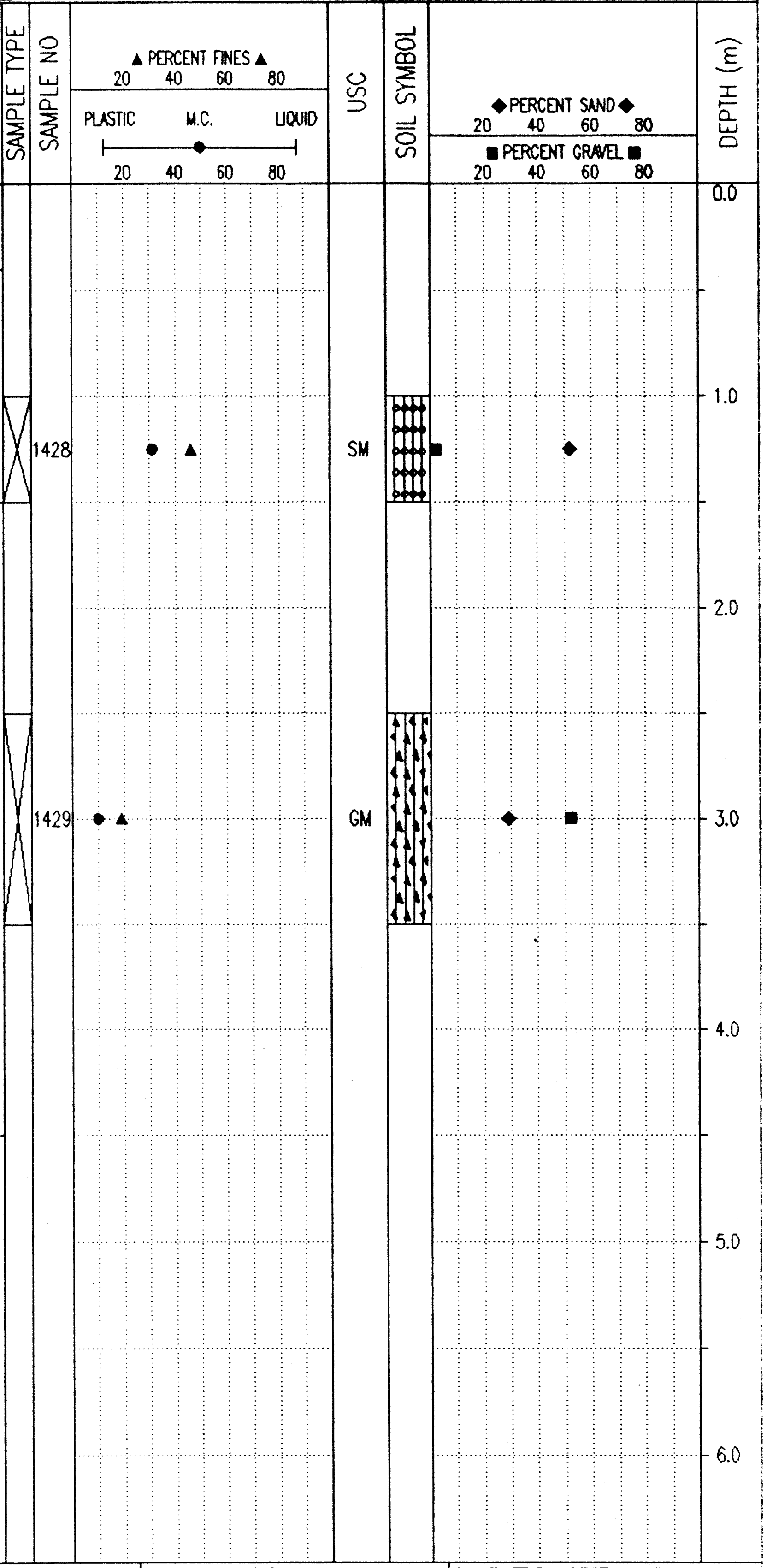
2001
Test Hole Logs

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 625-1948
ENGINEERING CAPITAL	LEWIS CREEK CHANNL	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE

SOIL DESCRIPTION

DEPTH (m)	SOIL DESCRIPTION
0.0	SANDY GRAVEL -moist
	SILTY SAND (SM) -with organics -grindy drilling from surface -moist
1.0	
	SILTY GRAVEL WITH SAND (GM) -black -moist -smooth drilling - odd grindy
2.0	
3.0	
4.0	
	END HOLE @ 4.5m Note: previously excavated to build berm
5.0	
6.0	

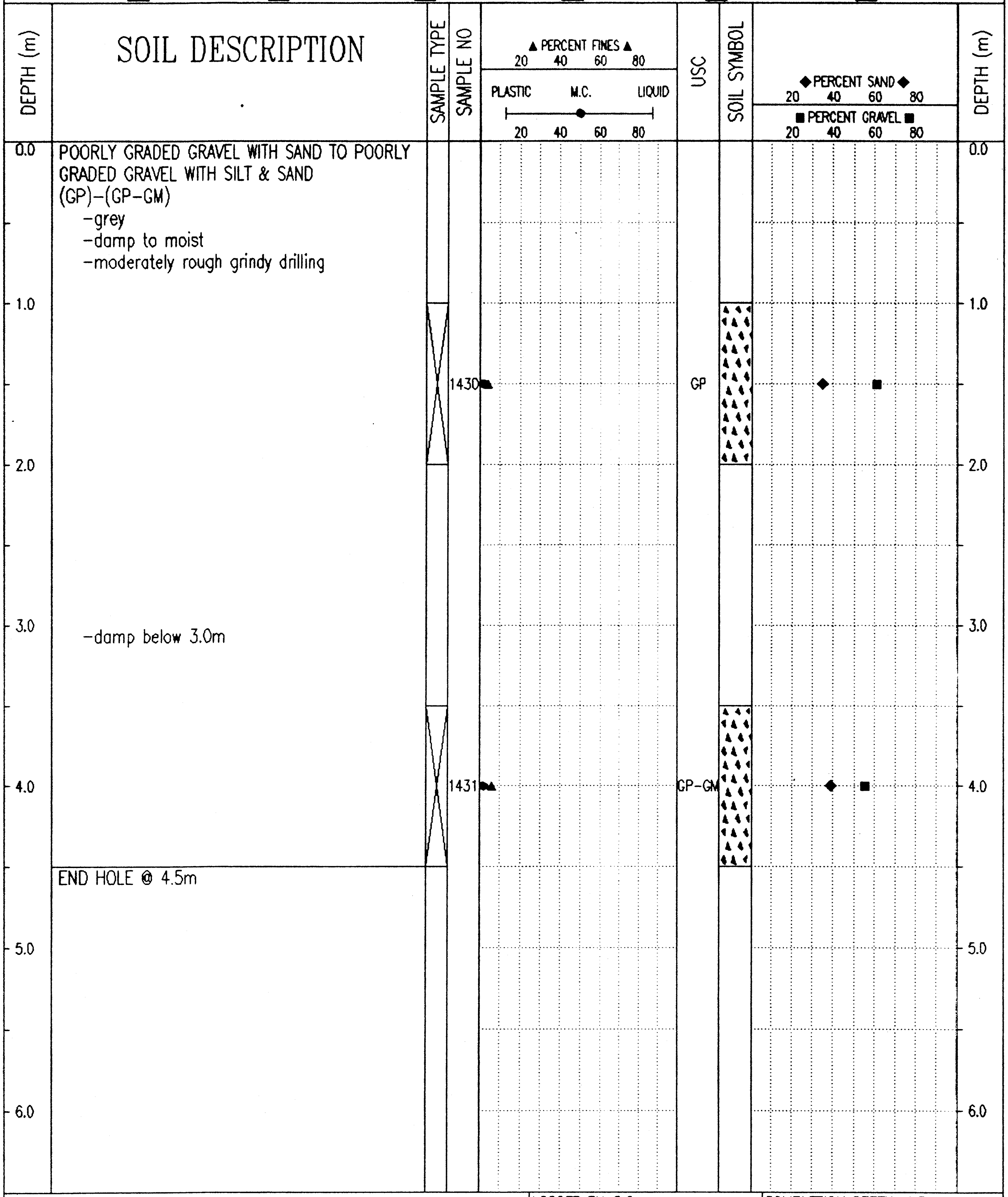


Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/09/25
	Fig. No:	Page 1 of 1

02/01/21 11:31AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 625-1949
ENGINEERING CAPITAL	LEWIS CREEK CHANNEL	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▯ CORE



POORLY GRADED GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GP)-(GP-GM)
- -grey
- -damp to moist
- -moderately rough grindy drilling
- -damp below 3.0m

END HOLE @ 4.5m

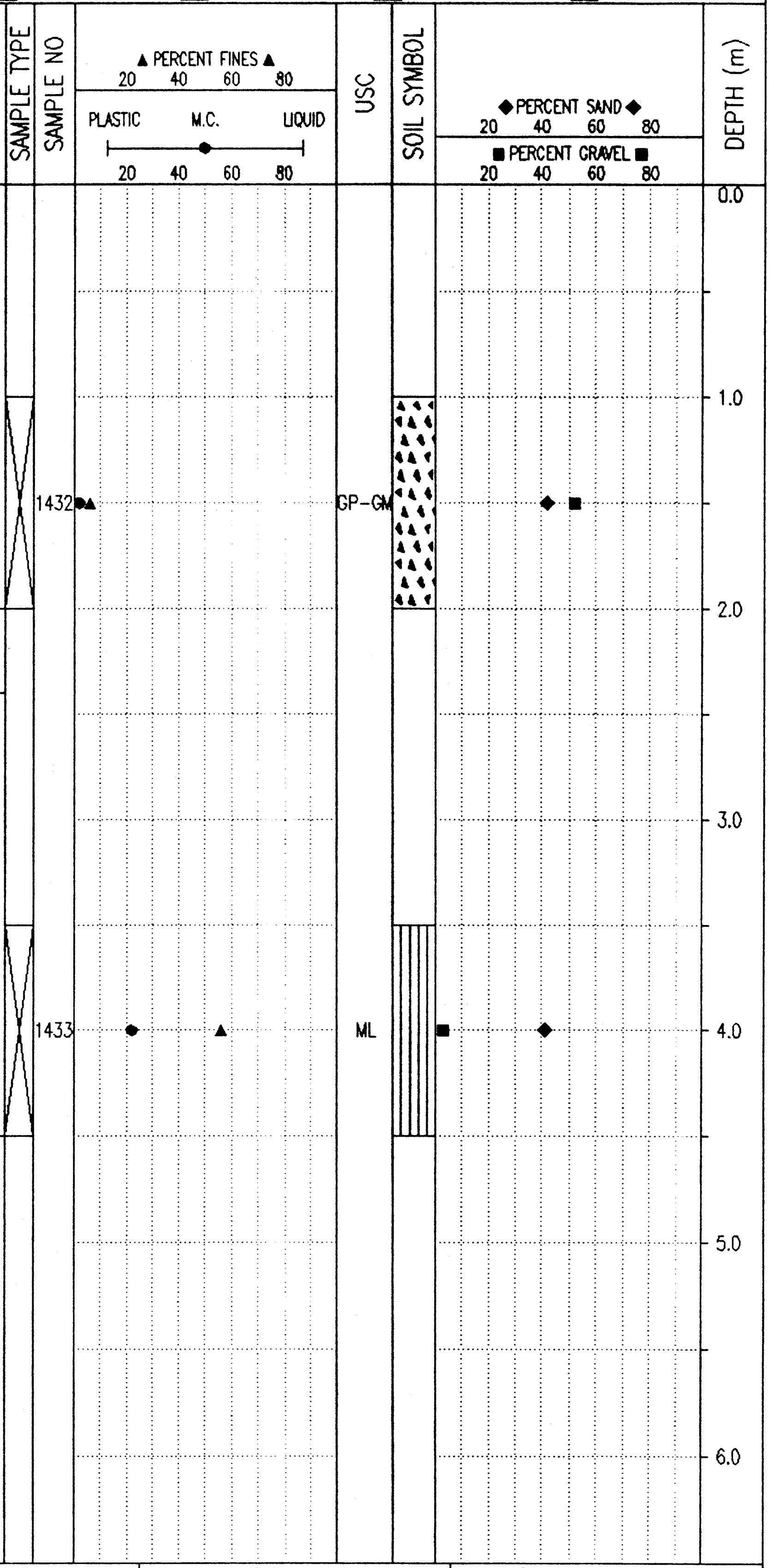
Government of Yukon	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
Transportation Engineering	REVIEWED BY:	COMPLETE: 01/09/25
	Fig. No:	Page 1 of 1

02/01/21 11:48AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 625-1950
ENGINEERING CAPITAL	LEWIS CREEK CHANNEL	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⧄ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ◨ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -grey -damp -rough drilling from surface
2.0	ORGANICS - WOOD -smooth penetration
2.4	SANDY SILT (ML) -brown -moist -smooth drilling
4.5	END HOLE @ 4.5m Note: Approx 30m rt of existing channel



Government of Yukon Transportation Engineering	LOGGED BY: G.C.
	REVIEWED BY:
	Fig. No:
COMPLETION DEPTH: 4.5 m	COMPLETE: 01/09/25
	Page 1 of 1

02/01/21 11:31AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 625-1951
ENGINEERING CAPITAL	LEWIS CREEK CHANNEL	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◫ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)

SOIL DESCRIPTION

0.0 POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)

- -brown
- -damp
- -rough drilling from surface

1.0

2.0

- -not as rough drilling below 2.8m

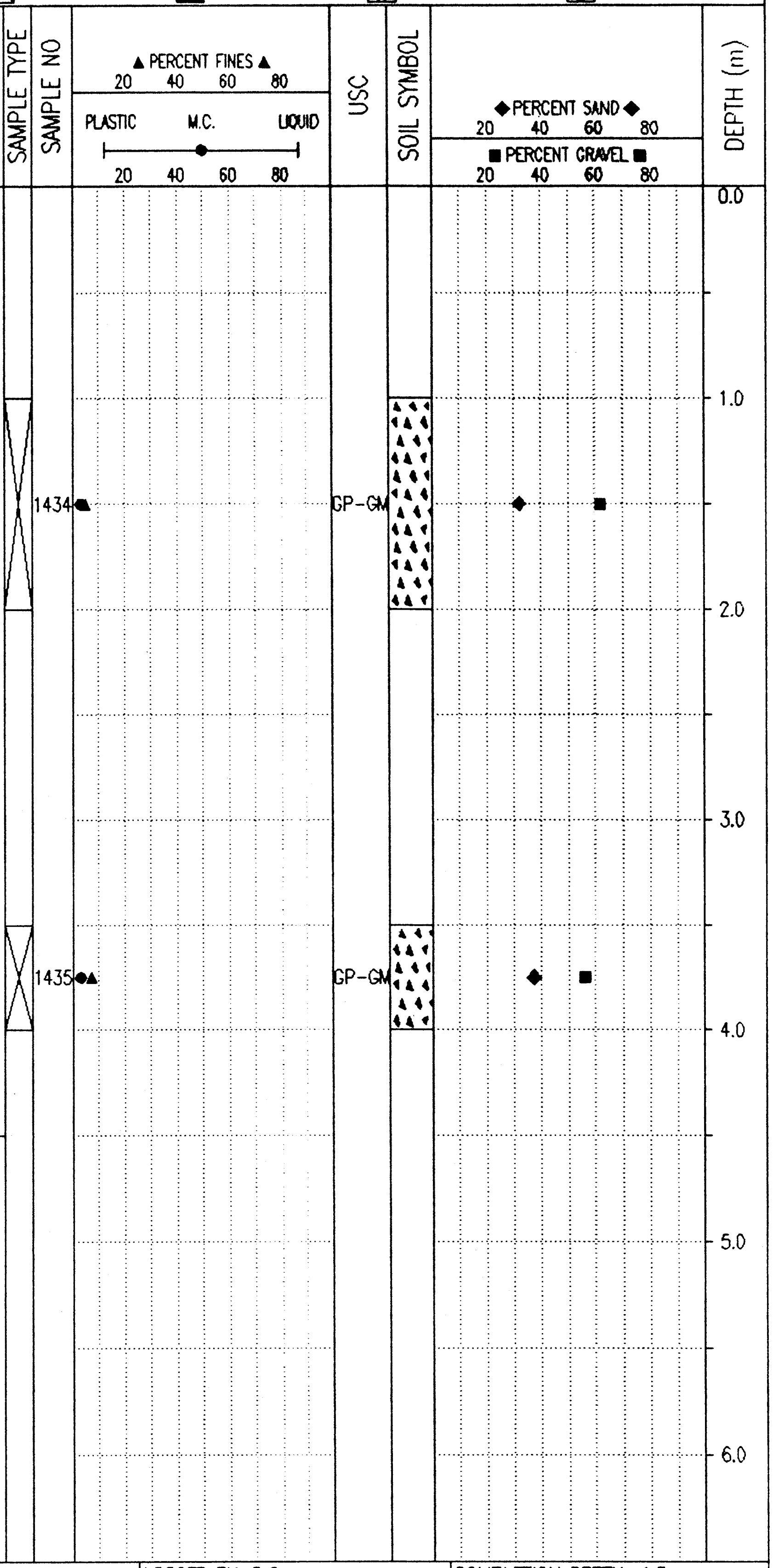
3.0

4.0

END HOLE @ 4.5m

5.0

6.0



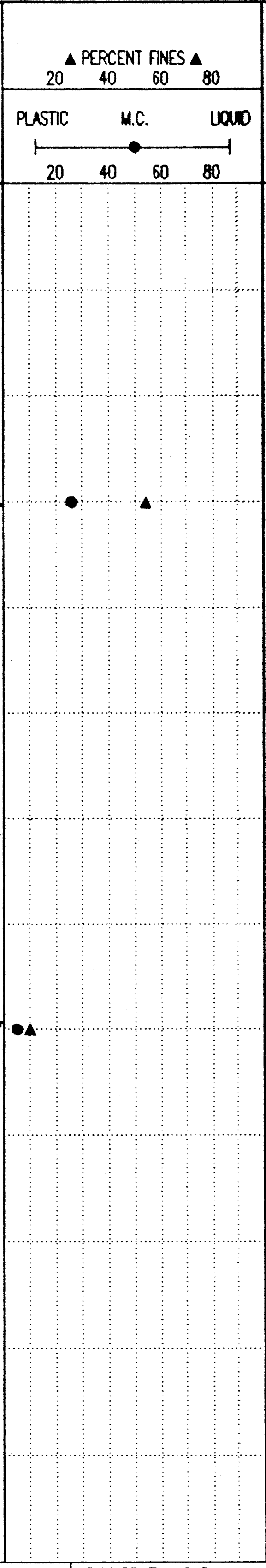
Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/09/25
	Fig. No:	Page 1 of 1

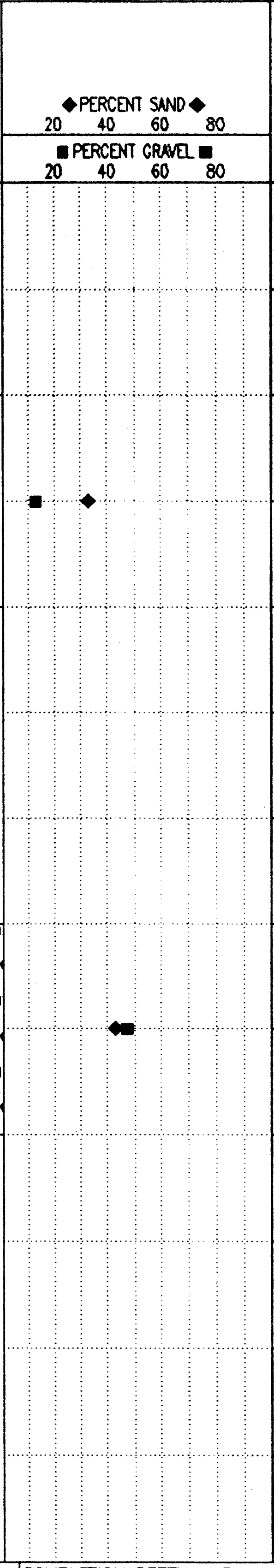
02/01/21 11:31AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 625-1952
ENGINEERING CAPITAL	LEWIS CREEK CHANNEL	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL
0.0	SANDY GRAVEL -grindy drilling from surface				
0.76	SANDY SILT (ML) -brown -wet -smooth drilling	☒ AUGER (1.0–2.0)	1436	ML	▥
2.4	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown -moist -grindy drilling	☒ AUGER (3.5–4.5)	1437	GP-GM	▲
4.5	END HOLE @ 4.5m				



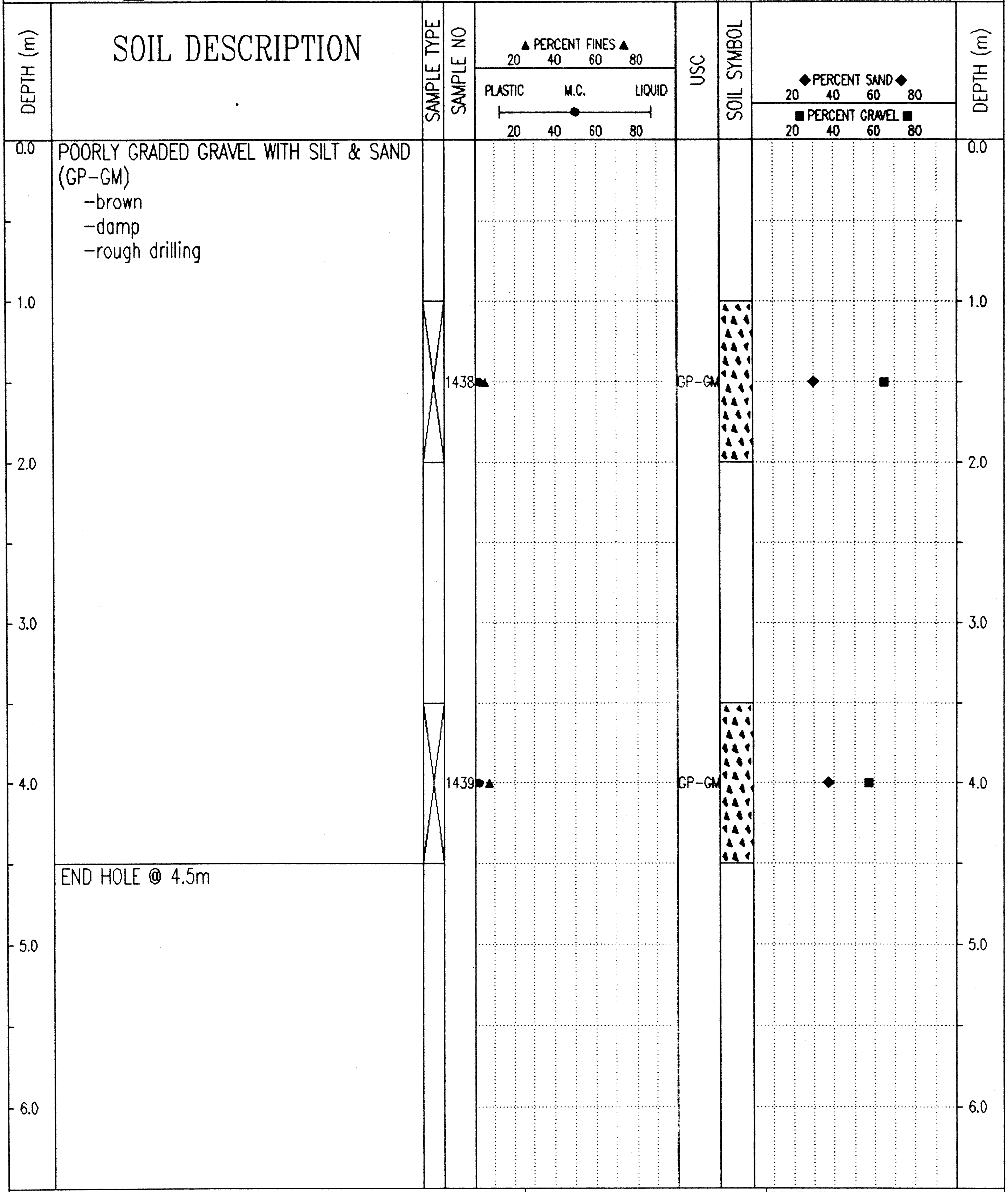


Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/09/25
	Fig. No:	Page 1 of 1

02/01/21 11:32AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 625-1953
ENGINEERING CAPITAL	LEWIS CREEK CHANNEL	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ◫ CORE



POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)
- brown
- damp
- rough drilling

END HOLE @ 4.5m

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/09/25
	Fig. No:	Page 1 of 1

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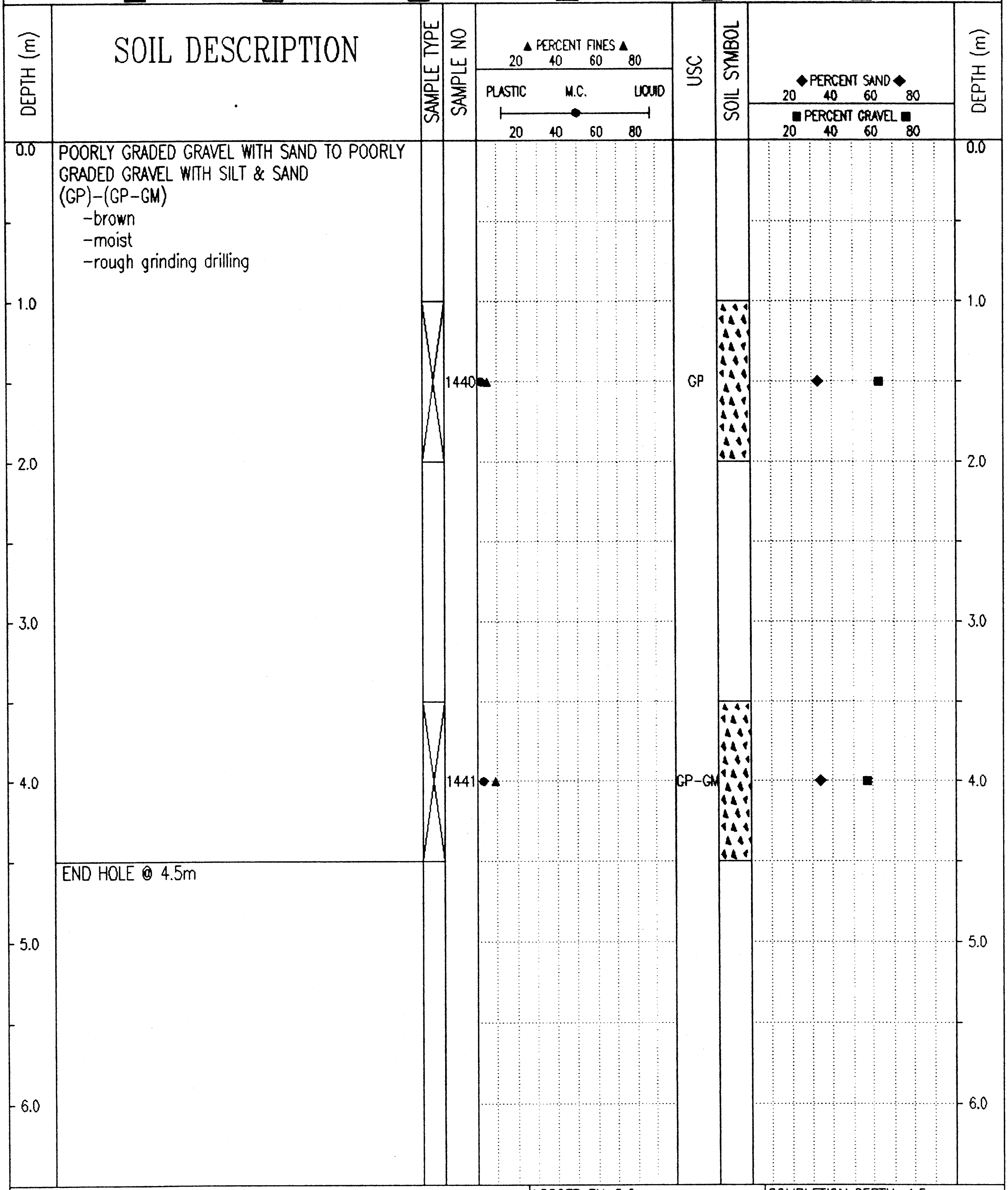
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 625-1954
ENGINEERING CAPITAL	LEWIS CREEK CHANNEL	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



POORLY GRADED GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND
(GP)-(GP-GM)
- brown
- moist
- rough grinding drilling

END HOLE @ 4.5m

Government of Yukon
Transportation Engineering

LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 01/09/25
Fig. No:	Page 1 of 1

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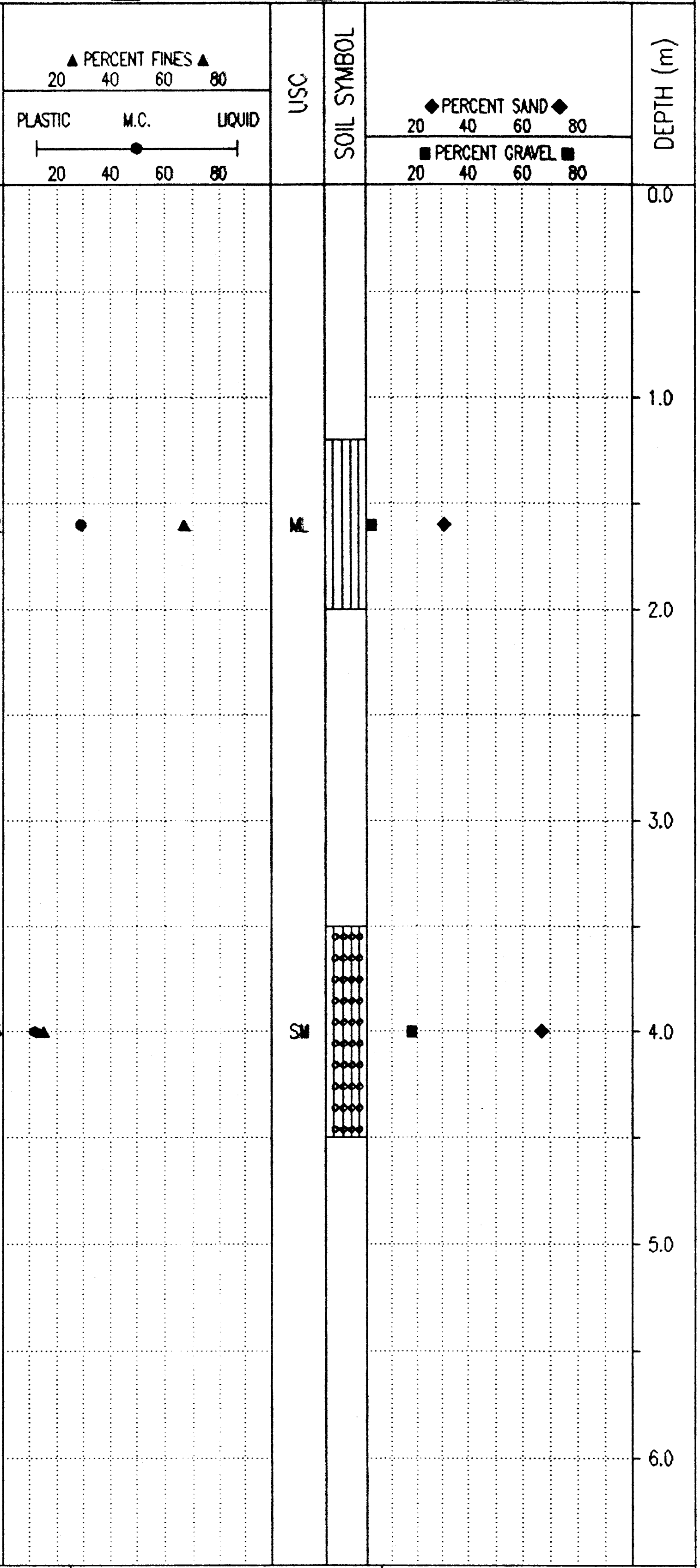
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 625-1955
ENGINEERING CAPITAL	LEWIS CREEK CHANNEL	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▯ CORE

SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
SANDY GRAVEL -brown -damp			
SANDY SILT (ML) -moist to wet -smooth drilling	☒	1442	ML
SILTY SAND WITH GRAVEL (SM) -brown -wet -smooth drilling	☒	1443	SM
END HOLE @ 4.5m			



Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/09/25
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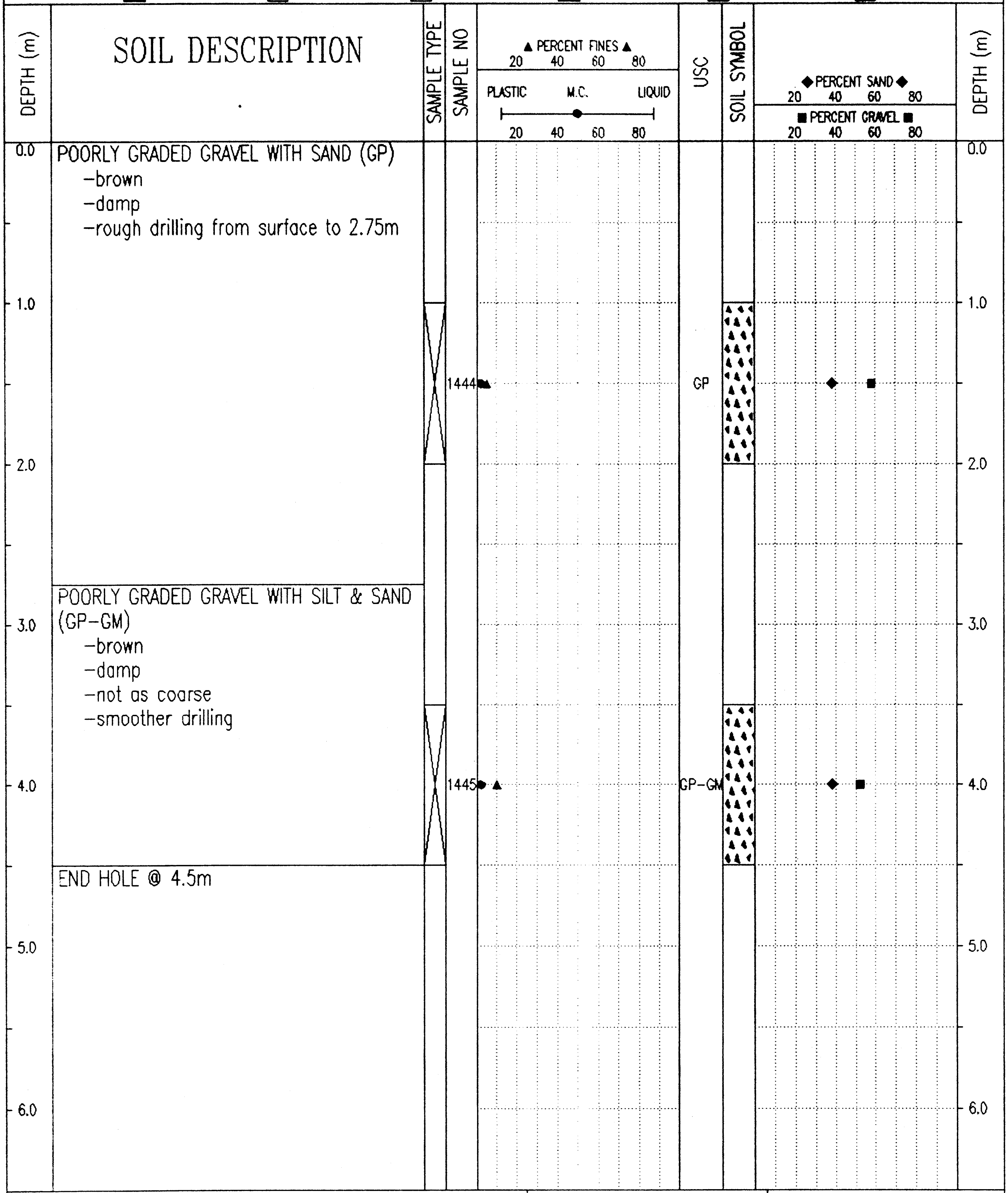
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 625-1956
ENGINEERING CAPITAL	LEWIS CREEK CHANNEL	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▯ CORE



POORLY GRADED GRAVEL WITH SAND (GP)
- brown
- damp
- rough drilling from surface to 2.75m

POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)
- brown
- damp
- not as coarse
- smoother drilling

END HOLE @ 4.5m

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/09/25
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 625-1957
ENGINEERING CAPITAL	LEWIS CREEK CHANNEL	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)

SOIL DESCRIPTION

0.0 SILTY GRAVEL WITH SAND (GM)
- brown – grey
- damp
- smooth drilling to 2.0m

1.0

2.0 POORLY GRADED GRAVEL WITH SILT & SAND (GP–GM)
- minor grindy drilling

3.0

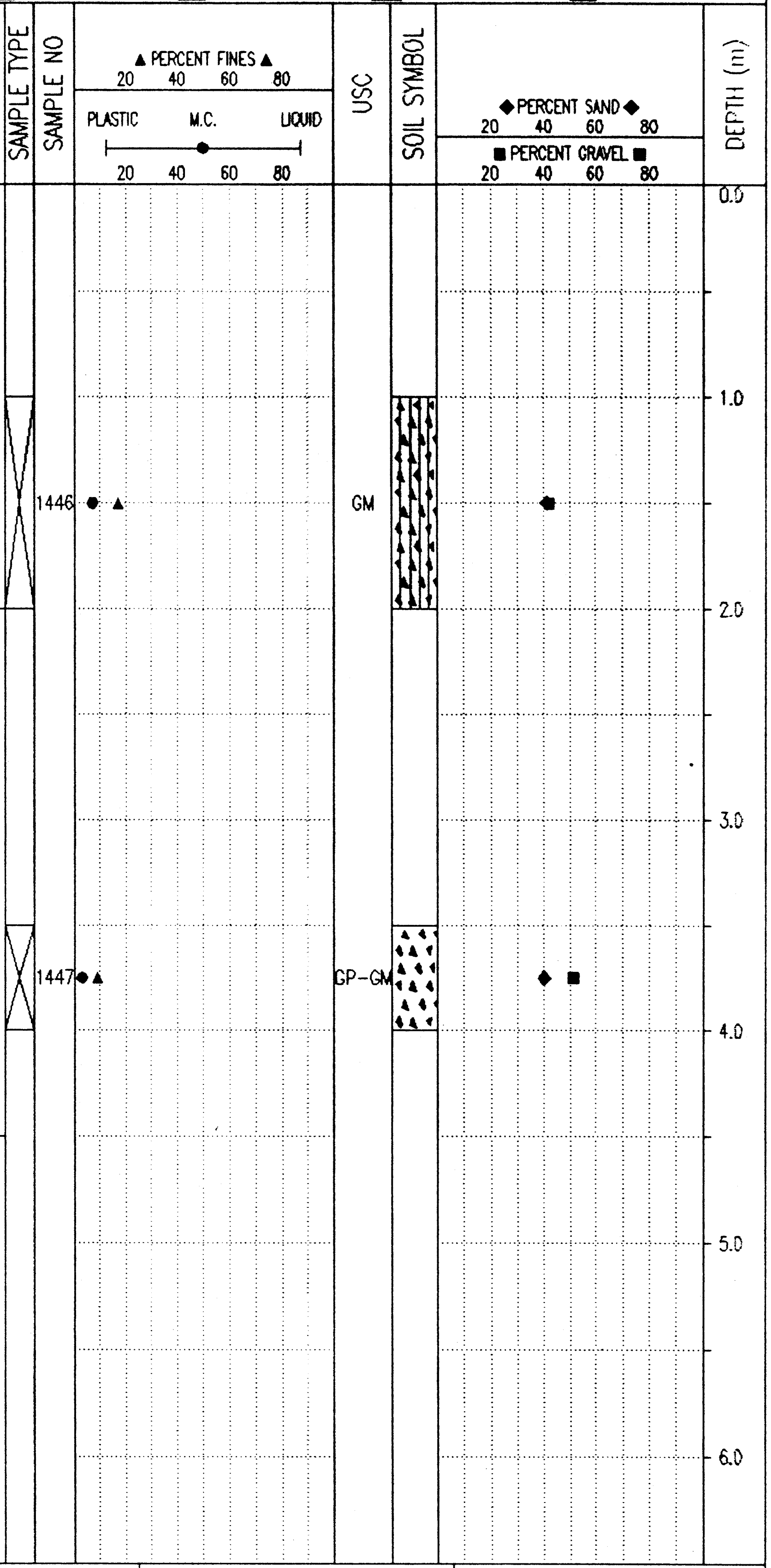
- more grindy drilling below 3.5m

4.0

END HOLE @ 4.5m

5.0

6.0



Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/09/25
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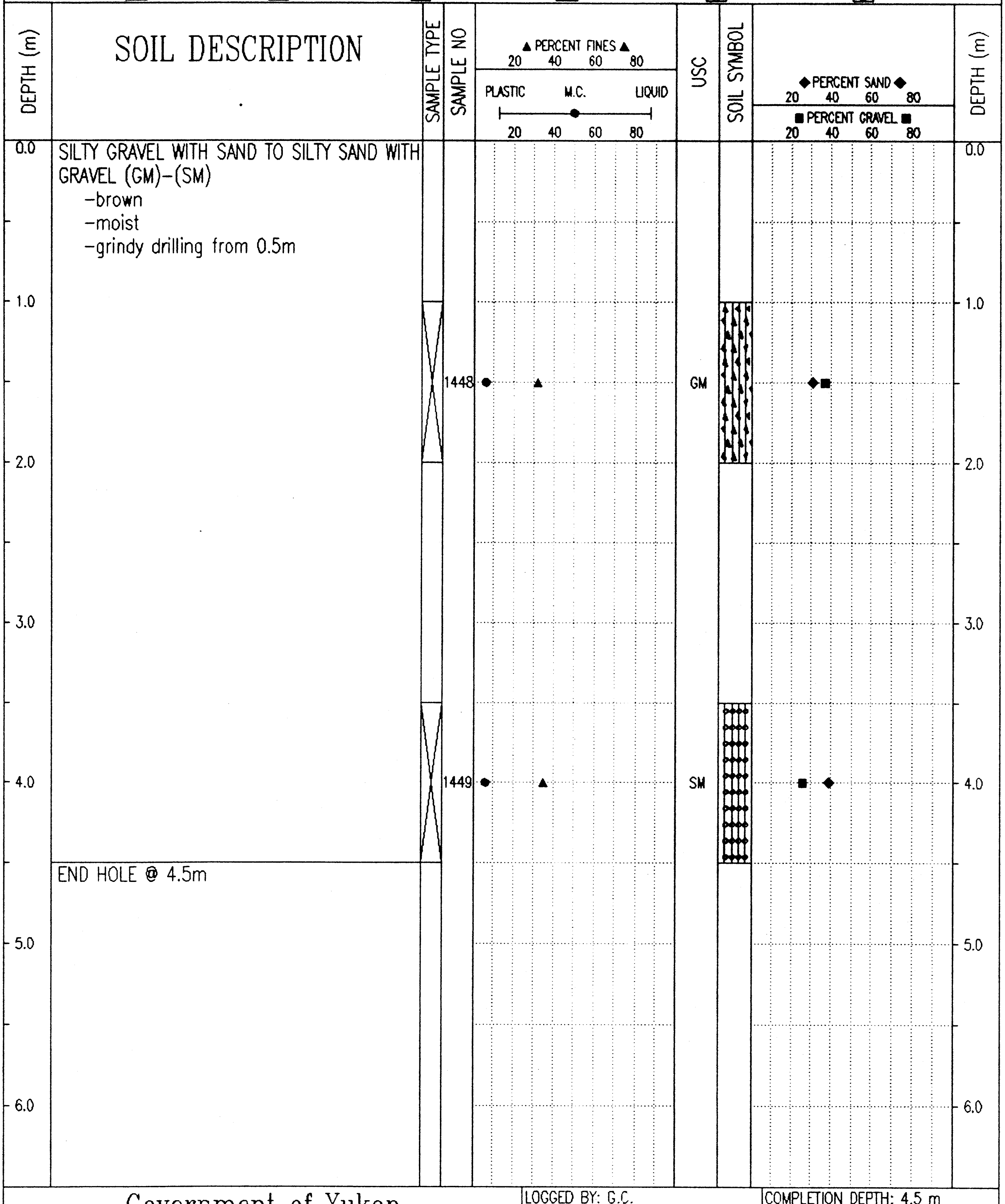
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 625-1958
ENGINEERING CAPITAL	LEWIS CREEK CHANNEL	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION:SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



SOIL DESCRIPTION

SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM)
- -brown
- -moist
- -grindy drilling from 0.5m

END HOLE @ 4.5m

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/09/25
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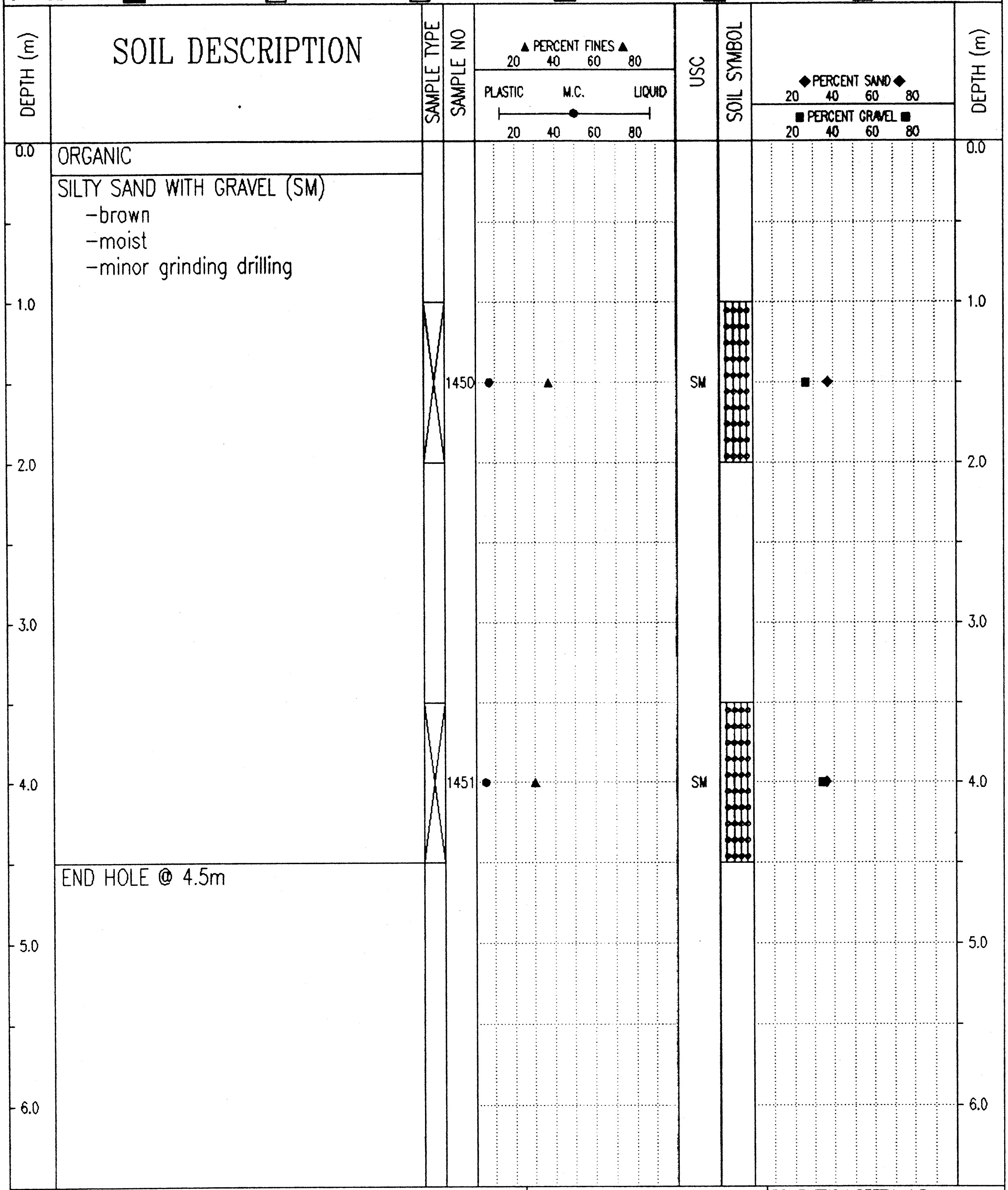
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 625-1959
ENGINEERING CAPITAL	LEWIS CREEK CHANNEL	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ▤ BULK ◫ TUBE ◫ CORE



ORGANIC

SILTY SAND WITH GRAVEL (SM)
- brown
- moist
- minor grinding drilling

END HOLE @ 4.5m

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/09/25
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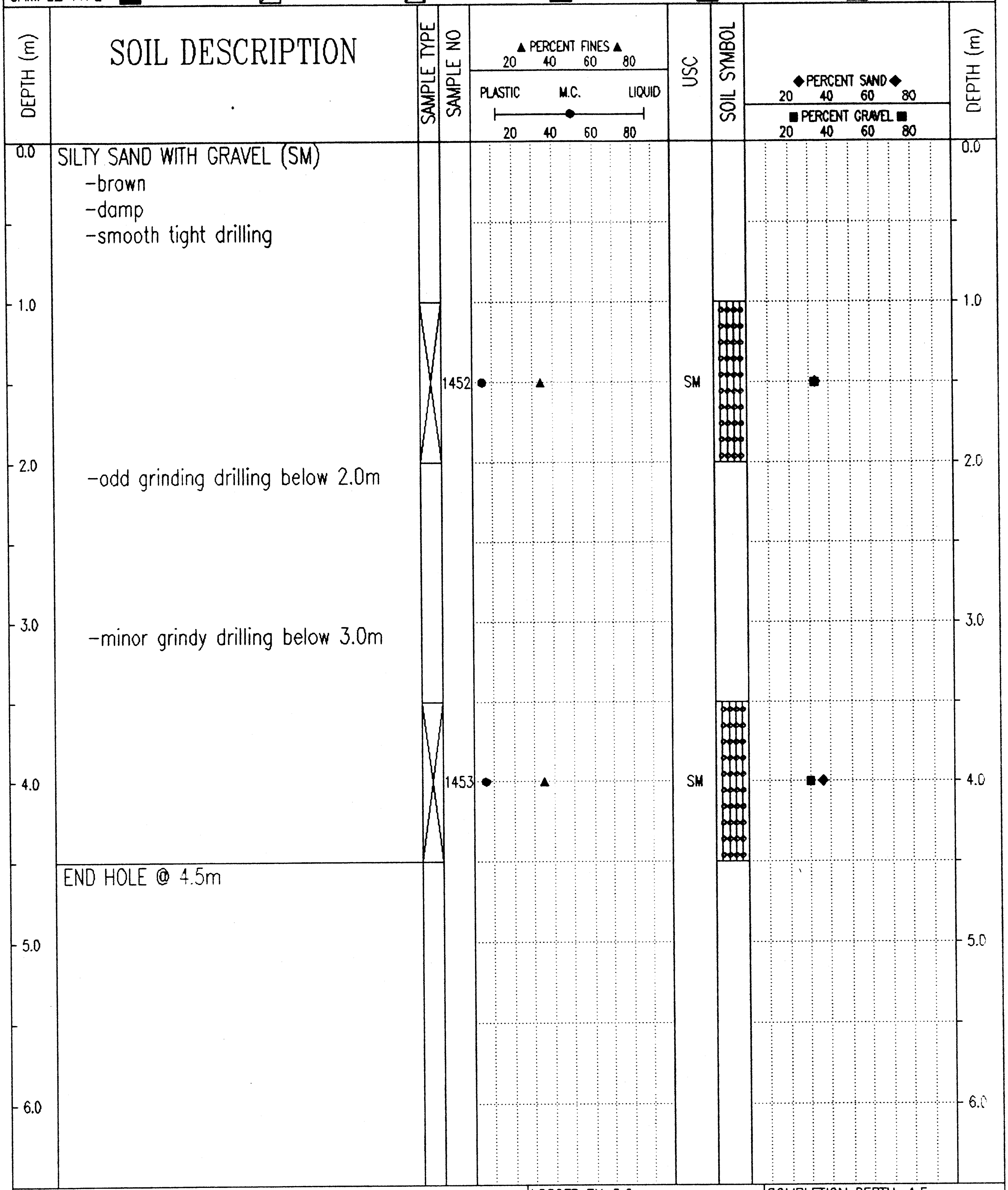
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 625-1960
ENGINEERING CAPITAL	LEWIS CREEK CHANNEL	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⧄ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ◧ CORE



SILTY SAND WITH GRAVEL (SM)
- brown
- damp
- smooth tight drilling
- odd grinding drilling below 2.0m
- minor grindy drilling below 3.0m

END HOLE @ 4.5m

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/09/25
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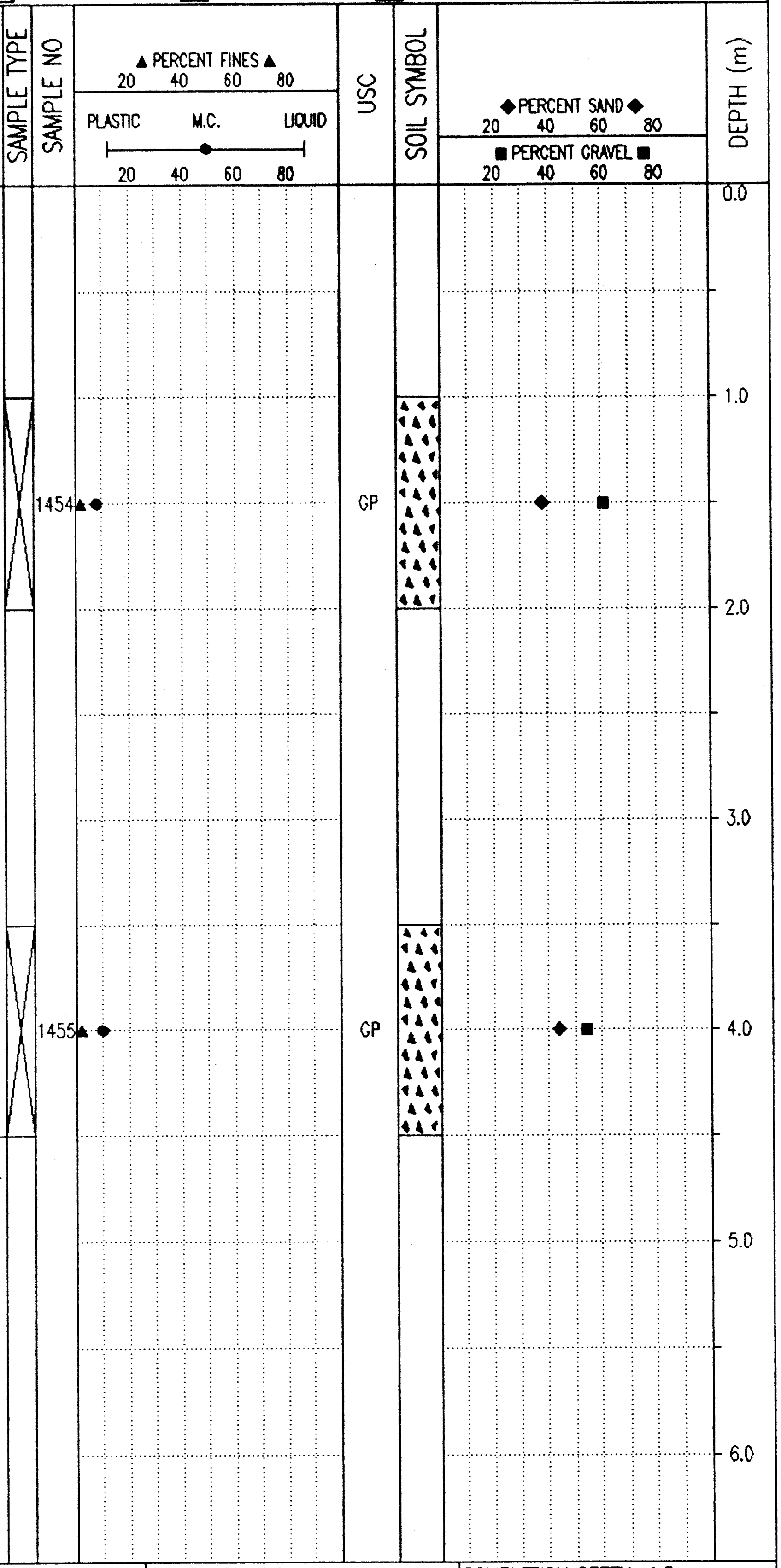
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 625-1961
ENGINEERING CAPITAL	LEWIS CREEK CHANNEL	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	POORLY GRADED GRAVEL WITH SAND (GP) -saturated -rough drilling from surface to 3.0m
1.0	
2.0	
3.0	-smooth easy penetration below 3.0m
4.0	
4.5	END HOLE @ 4.5m Note: 50m upchain of # 1960 - moving water same toward grid area
5.0	
6.0	



Government of Yukon
Transportation Engineering

LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 01/09/25
Fig. No:	Page 1 of 1

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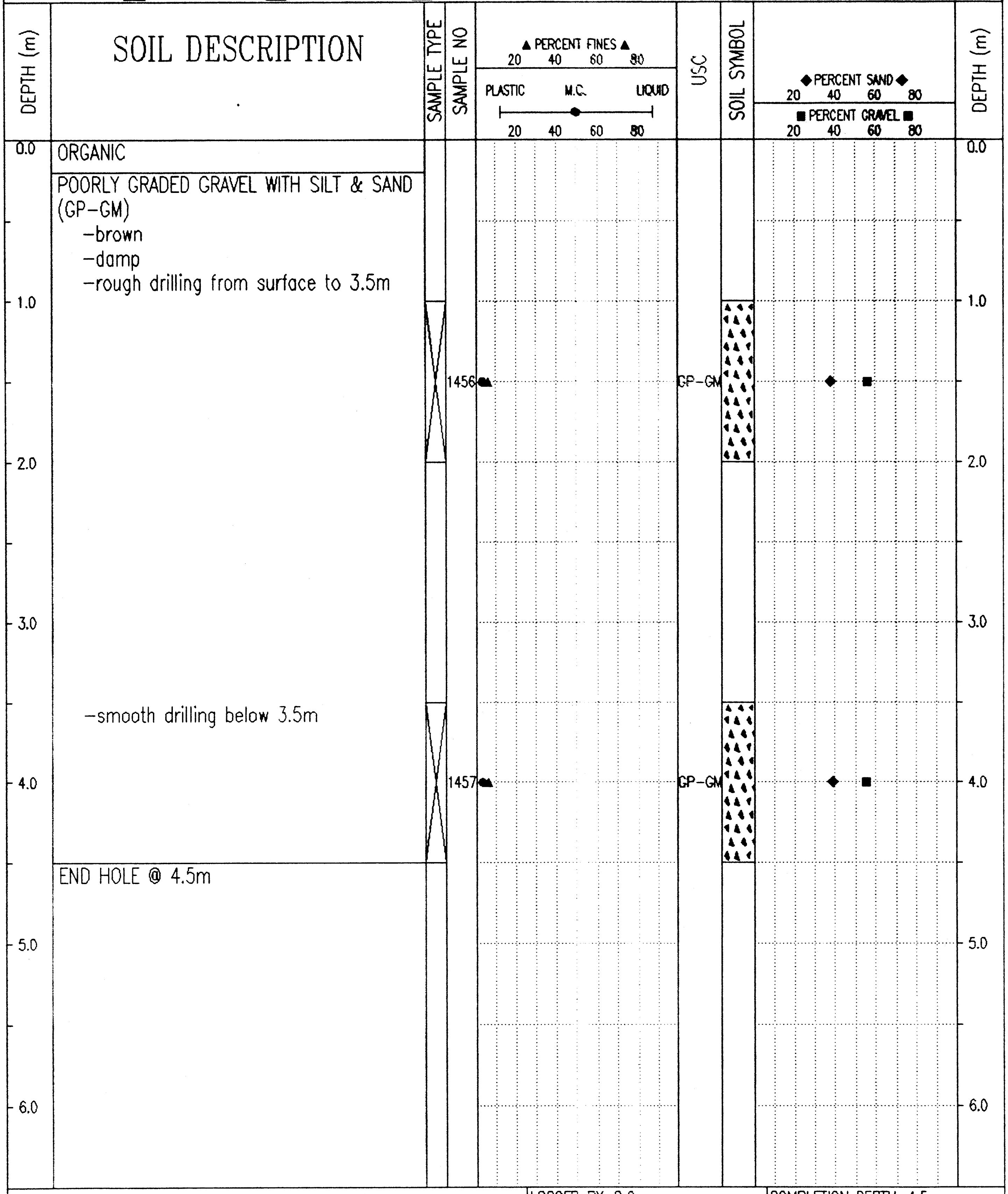
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAS SEG 11	TEST HOLE NO: 625-1962
ENGINEERING CAPITAL	LEWIS CREEK CHANNEL	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



DEPTH (m)	SOIL DESCRIPTION	SAMPLE NO	USC
0.0	ORGANIC		
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown -damp -rough drilling from surface to 3.5m		
1.5		1456	GP-GM
3.5	-smooth drilling below 3.5m		
4.0		1457	GP-GM
4.5	END HOLE @ 4.5m		

Government of Yukon
Transportation Engineering

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REVIEWED BY:	COMPLETE: 01/09/25
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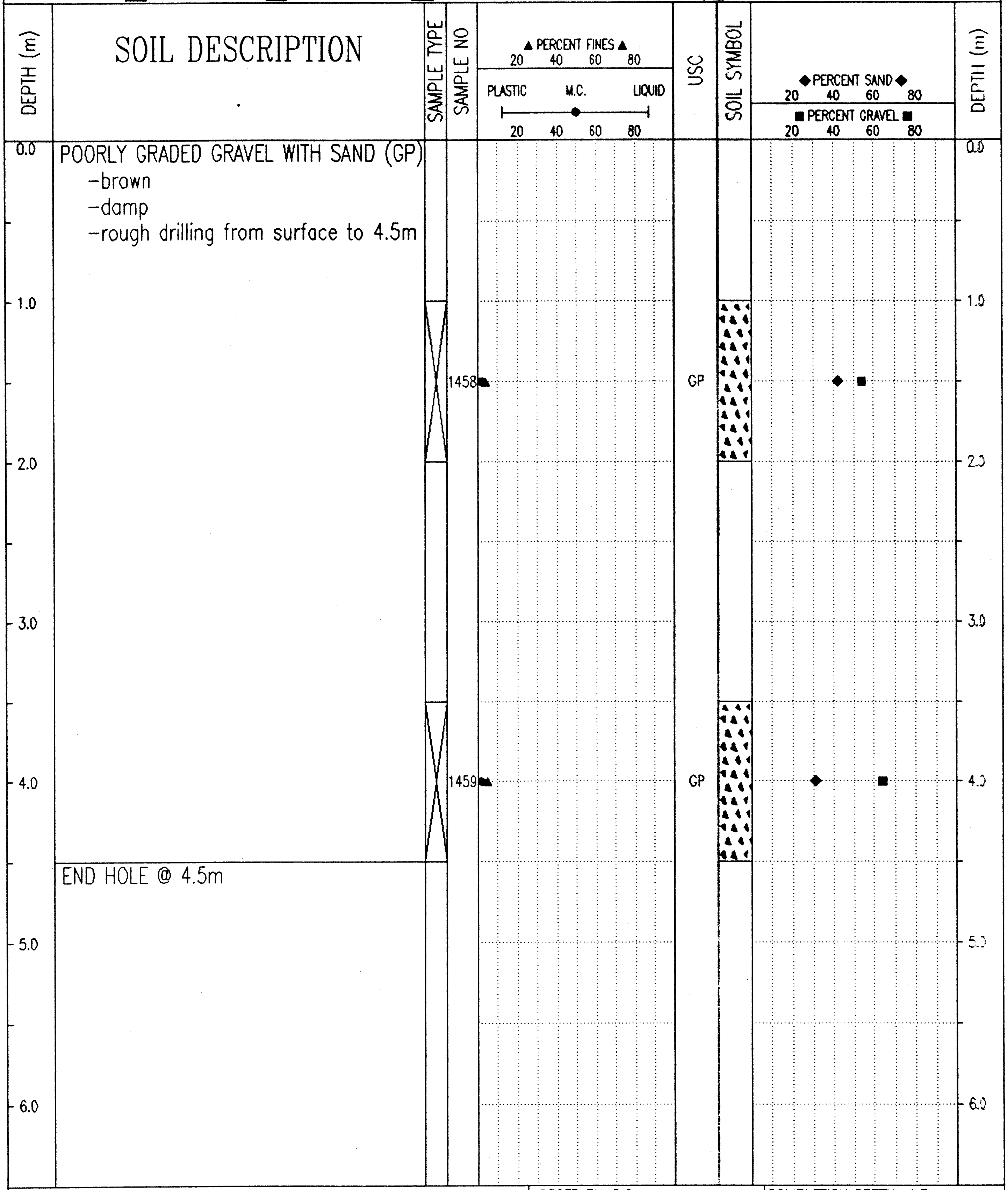
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAS SEG 11	TEST HOLE NO: 625-1963
ENGINEERING CAPITAL	LEWIS CREEK CHANNEL	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



POORLY GRADED GRAVEL WITH SAND (GP)
- -brown
- -damp
- -rough drilling from surface to 4.5m

END HOLE @ 4.5m

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/09/25
	Fig. No:	Page 1 of 1

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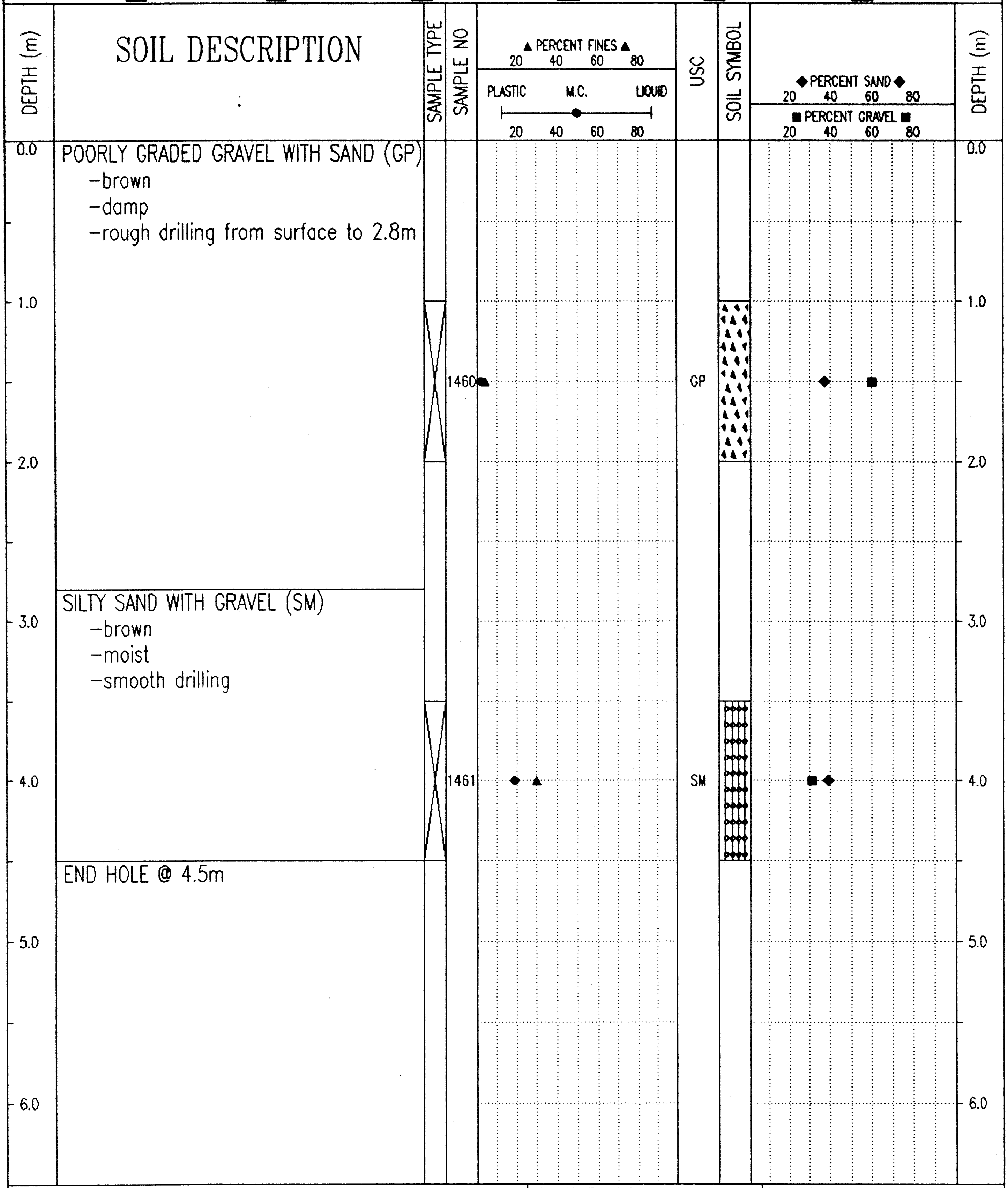
SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 625-1964
ENGINEERING CAPITAL	LEWIS CREEK CHANNEL	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◺ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



POORLY GRADED GRAVEL WITH SAND (GP)
- brown
- damp
- rough drilling from surface to 2.8m

SILTY SAND WITH GRAVEL (SM)
- brown
- moist
- smooth drilling

END HOLE @ 4.5m

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 01/09/25
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Pit 115 G-04
Km 1750 LHS Alaska Highway

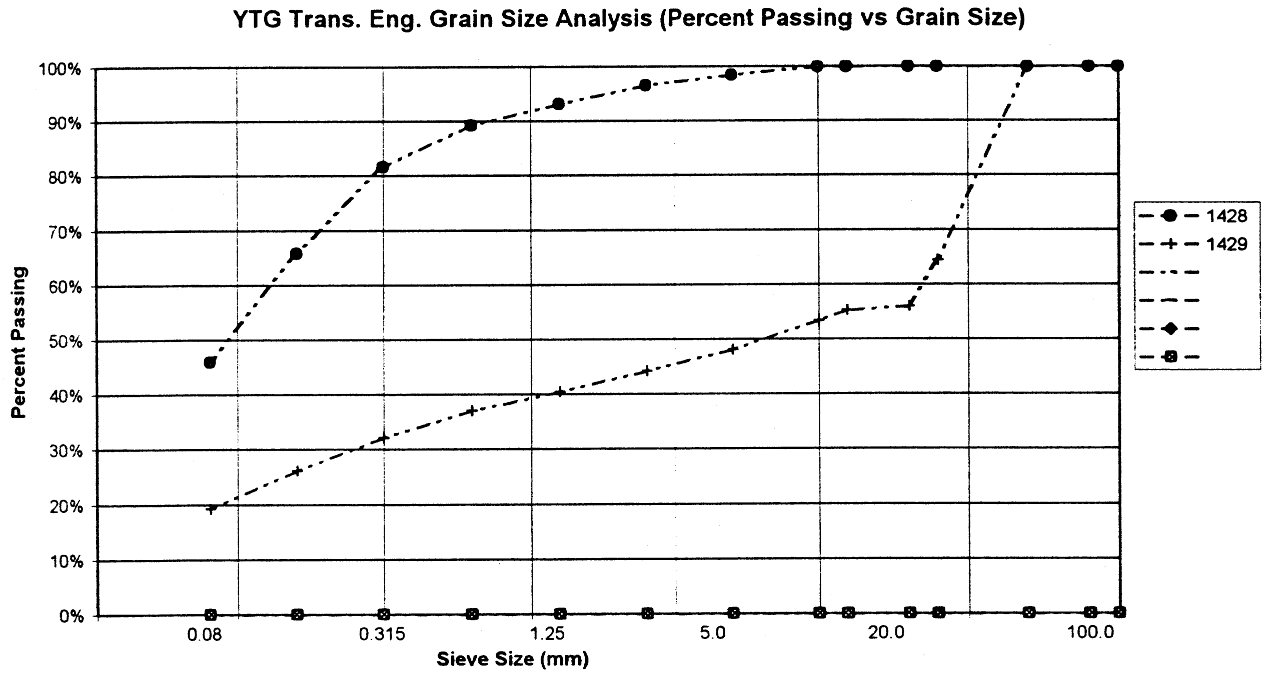
2001
Sample Test Results

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Lewis Creek Channel
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 625-1948

DATE COMP: 2001/09/25

FIELD NO:	1428	1429				
LAB NO:	2208	2209				
DEPTH:	1.0-1.5	2.5-3.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	**100%**	**100%**				
80.0	**100%**	**100%**				
50.0	**100%**	**100%**				
25.0	**100%**	**64%**				
20.0	**100%**	**56%**				
12.5	**100%**	**55%**				
10.0	**100%**	**53%**				
5.0	**98%**	**48%**				
2.5	**97%**	**44%**				
1.25	**93%**	**40%**				
0.630	**89%**	**37%**				
0.315	**82%**	**32%**				
0.160	**66%**	**26%**				
0.080	**46%**	**19%**				
M.C.(%):	31%	10%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	2	52				
% SAND:	52	29				
% FINES:	46	19				
CLASSIFICATION	SILTY SAND (SM)	SILTY GRAVEL WITH SAND (GM)				

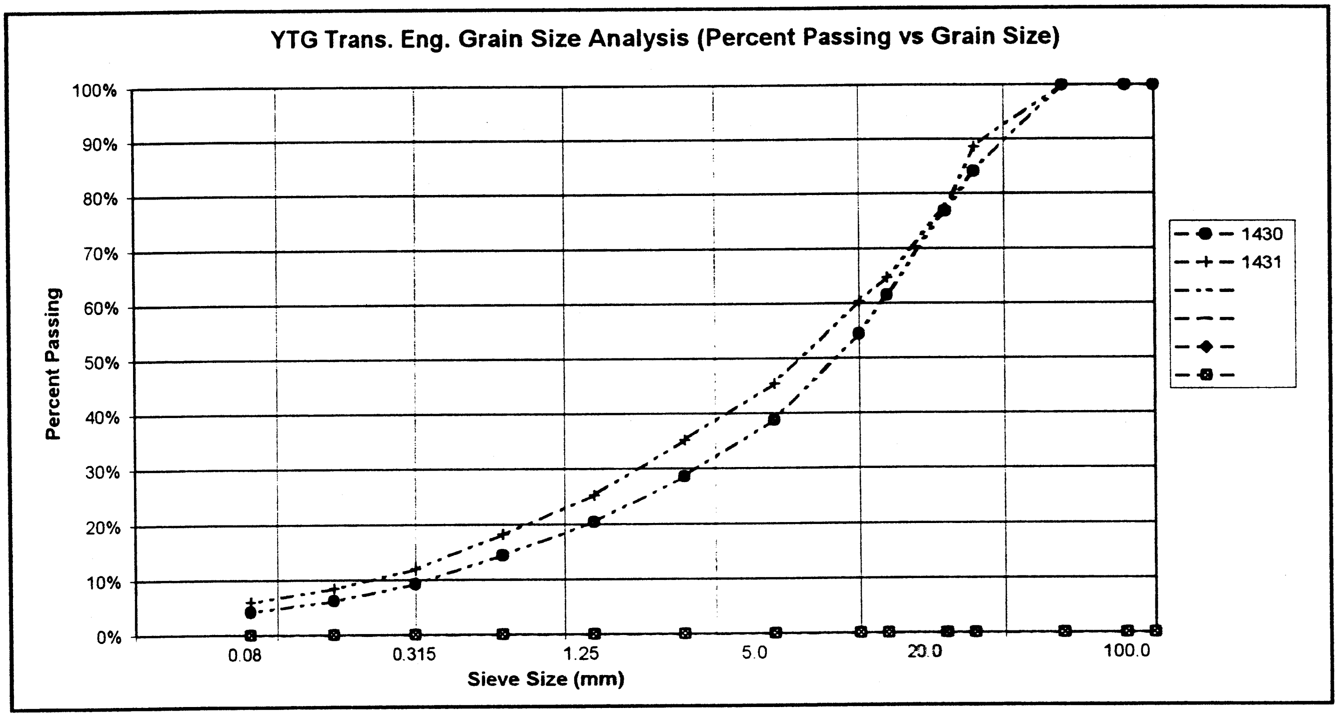


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Lewis Creek Channel
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 625-1949

DATE COMP: 2001/09/25

FIELD NO:	1430	1431				
LAB NO:	2210	2211				
DEPTH:	1.0-2.0	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	84%	89%				
20.0	77%	77%				
12.5	61%	65%				
10.0	54%	60%				
5.0	39%	45%				
2.5	29%	35%				
1.25	20%	25%				
0.630	14%	18%				
0.315	9%	12%				
0.160	6%	8%				
0.080	4%	6%				
M.C.(%):	2%	2%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	61	55				
% SAND:	35	39				
% FINES:	4	6				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				

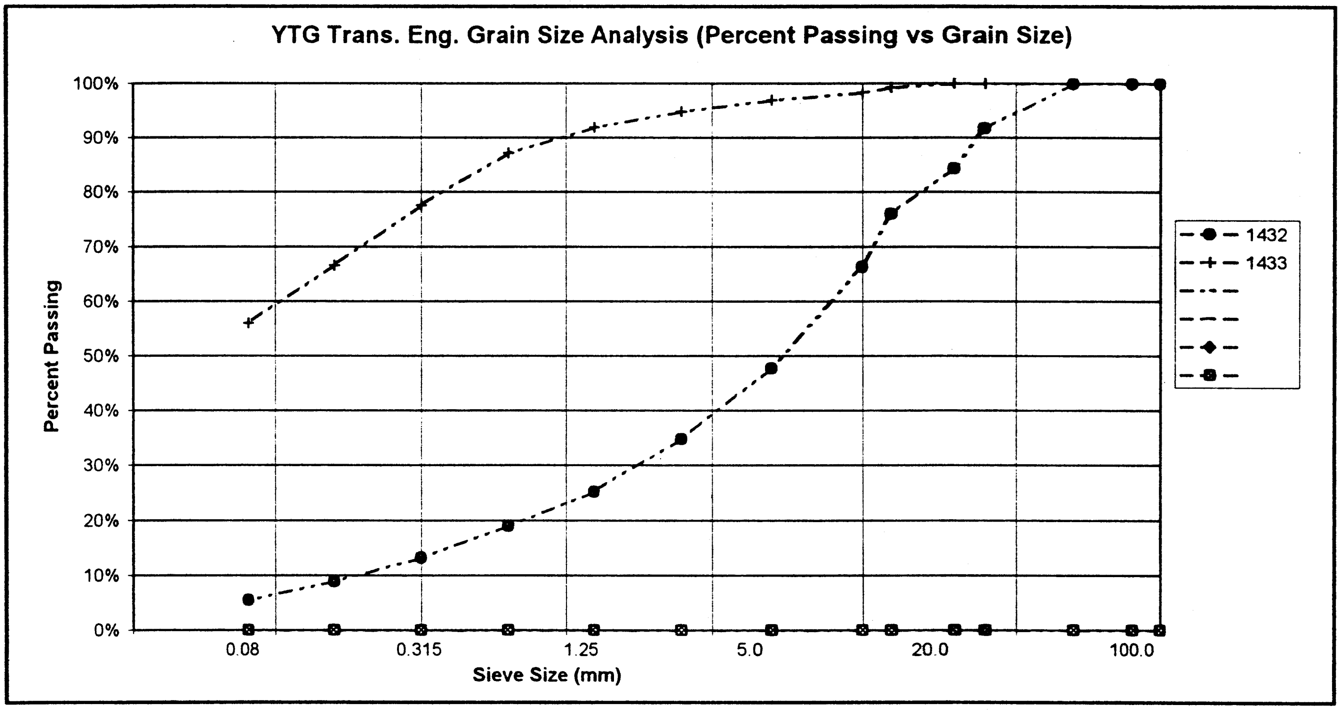


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Lewis Creek Channel
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 625-1950

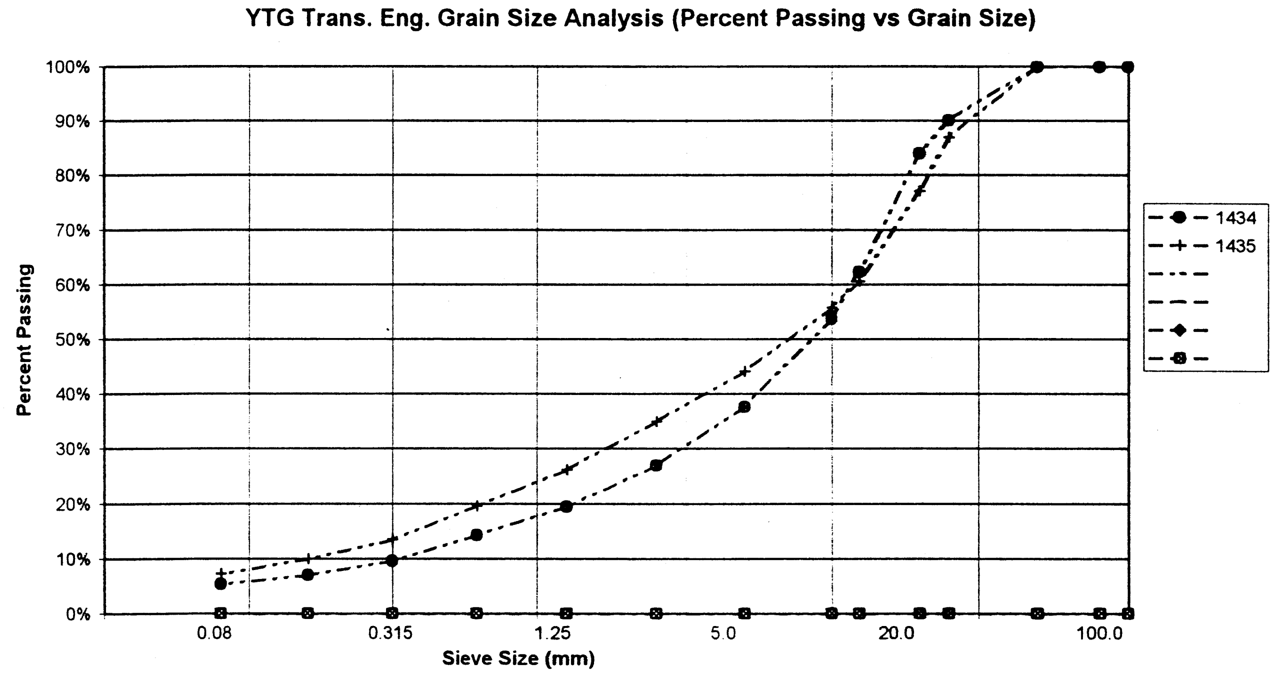
DATE COMP: 2001/09/25

FIELD NO:	1432	1433				
LAB NO:	2212	2213				
DEPTH:	1.0-2.0	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	92%	100%				
20.0	84%	100%				
12.5	76%	99%				
10.0	66%	98%				
5.0	48%	97%				
2.5	35%	95%				
1.25	25%	92%				
0.630	19%	87%				
0.315	13%	78%				
0.160	9%	67%				
0.080	6%	56%				
M.C.(%):	2%	22%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	52	3				
% SAND:	42	41				
% FINES:	6	56				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SANDY SILT (ML)				


YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
HOLE No.: 625-1951
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Lewis Creek Channel
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.
DATE COMP: 2001/09/25

FIELD NO:	1434	1435				
LAB NO:	2214	2215				
DEPTH:	1.0-2.0	3.5-4.0				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	90%	87%				
20.0	84%	77%				
12.5	62%	61%				
10.0	54%	56%				
5.0	38%	44%				
2.5	27%	35%				
1.25	19%	26%				
0.630	14%	20%				
0.315	10%	13%				
0.160	7%	10%				
0.080	5%	7%				
M.C.(%):	3%	3%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	62	56				
% SAND:	32	37				
% FINES:	5	7				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				

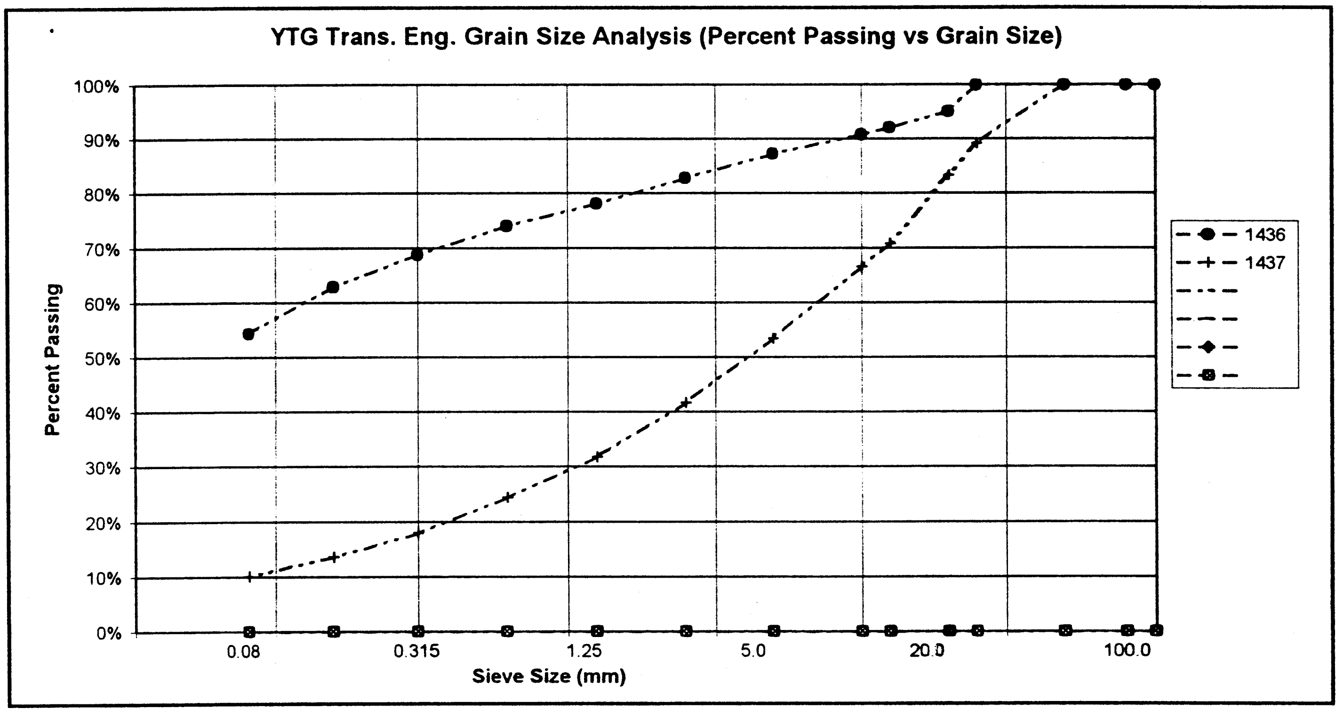


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Lewis Creek Channel
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 625-1952

DATE COMP: 2001/09/25

FIELD NO:	1436	1437				
LAB NO:	2216	2217				
DEPTH:	1.0-2.0	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	89%				
20.0	95%	83%				
12.5	92%	71%				
10.0	91%	67%				
5.0	87%	53%				
2.5	83%	42%				
1.25	78%	32%				
0.630	74%	24%				
0.315	69%	18%				
0.160	63%	14%				
0.080	54%	10%				
M.C.(%):	26%	5%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	13	47				
% SAND:	33	43				
% FINES:	54	10				
CLASSIFICATION	SANDY SILT (ML)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				

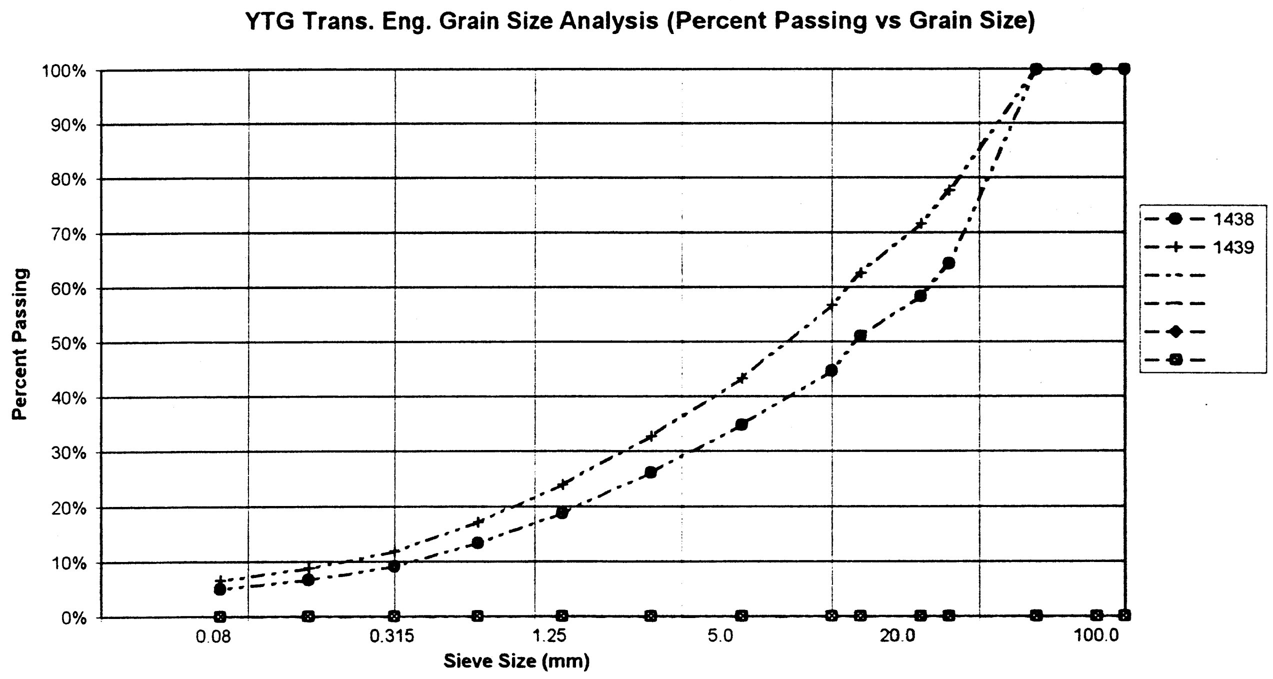


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Lewis Creek Channel
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 625-1953

DATE COMP: 2001/09/25

FIELD NO:	1438	1439				
LAB NO:	2218	2219				
DEPTH:	1.0-2.0	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	64%	78%				
20.0	58%	72%				
12.5	51%	63%				
10.0	45%	57%				
5.0	35%	43%				
2.5	26%	33%				
1.25	19%	24%				
0.630	13%	17%				
0.315	9%	12%				
0.160	7%	9%				
0.080	5%	7%				
M.C.(%):	2%	2%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	65	57				
% SAND:	30	37				
% FINES:	5	7				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				

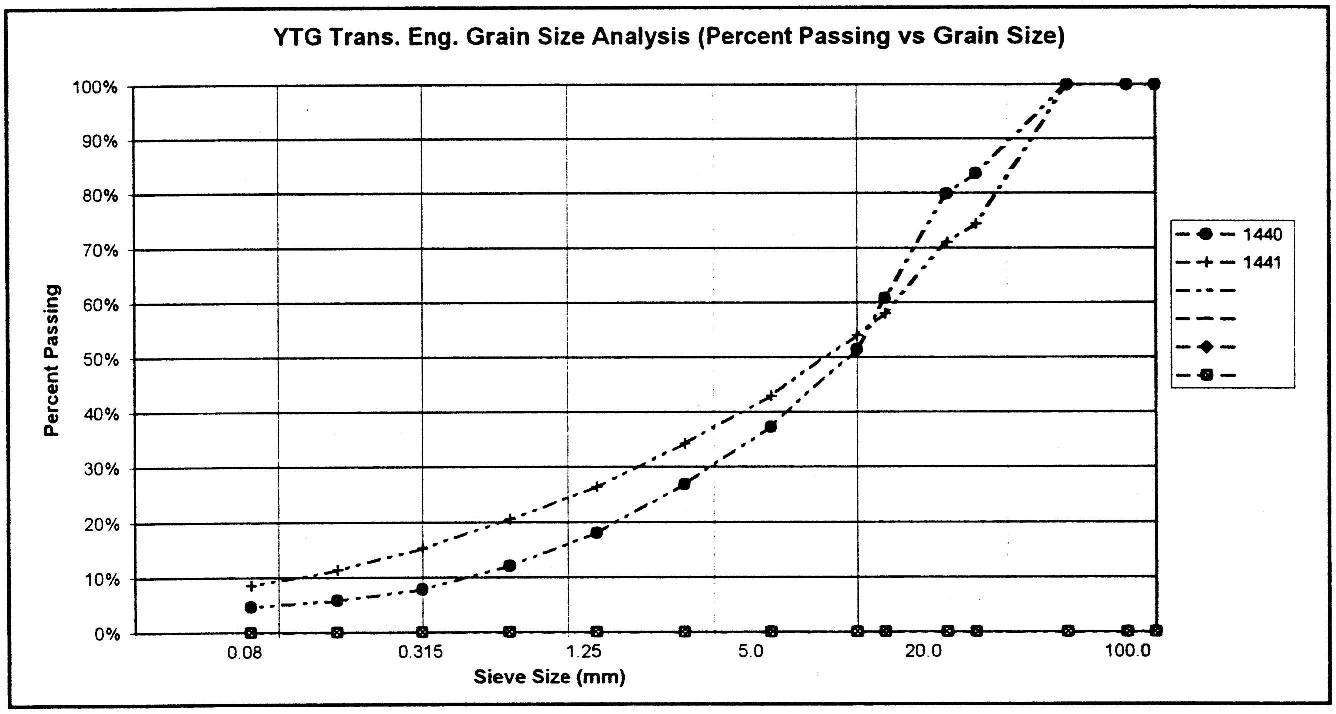


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Lewis Creek Channel
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 625-1954

DATE COMP: 2001/09/25

FIELD NO:	1440	1441				
LAB NO:	2220	2221				
DEPTH:	1.0-2.0	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	84%	74%				
20.0	80%	71%				
12.5	61%	58%				
10.0	51%	54%				
5.0	37%	43%				
2.5	27%	34%				
1.25	18%	26%				
0.630	12%	21%				
0.315	8%	15%				
0.160	6%	11%				
0.080	5%	9%				
M.C.(%):	2%	3%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	63	57				
% SAND:	33	34				
% FINES:	5	9				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				



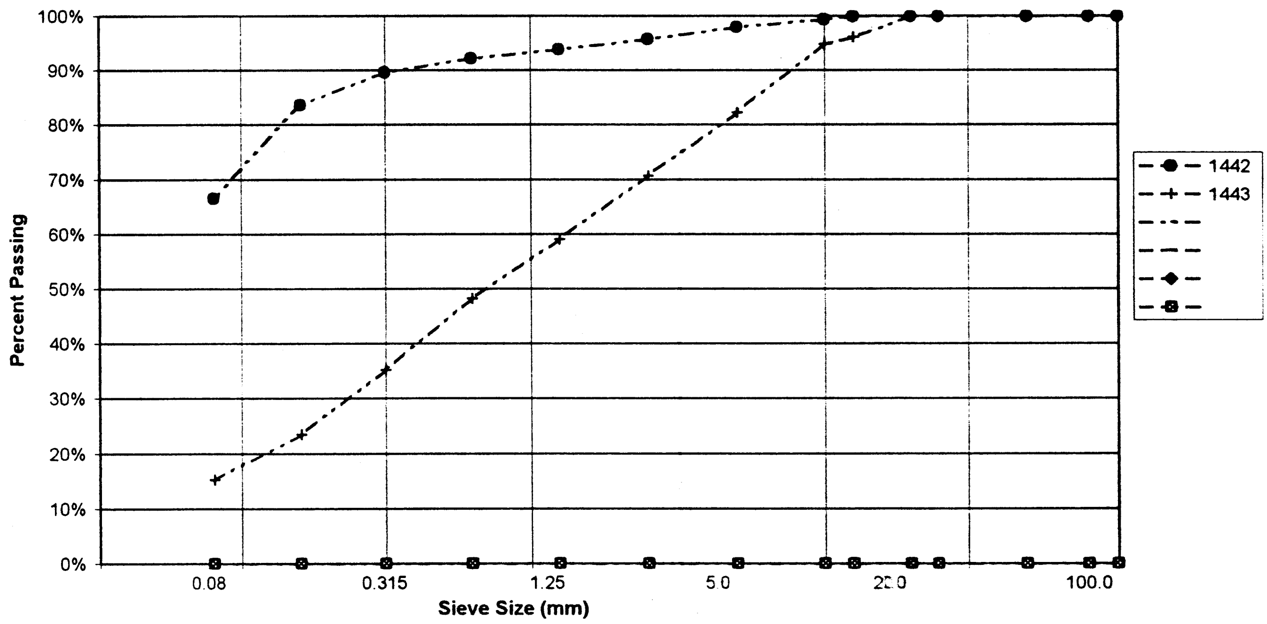
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Lewis Creek Channel
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 625-1955

DATE COMP: 2001/09/25

FIELD NO:	1442	1443				
LAB NO:	2222	2223				
DEPTH:	1.0-2.0	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	100%				
20.0	100%	100%				
12.5	100%	96%				
10.0	99%	95%				
5.0	98%	82%				
2.5	96%	71%				
1.25	94%	59%				
0.630	92%	48%				
0.315	90%	35%				
0.160	84%	23%				
0.080	67%	15%				
M.C.(%):	29%	12%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	2	18				
% SAND:	31	67				
% FINES:	67	15				
CLASSIFICATION	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)				

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

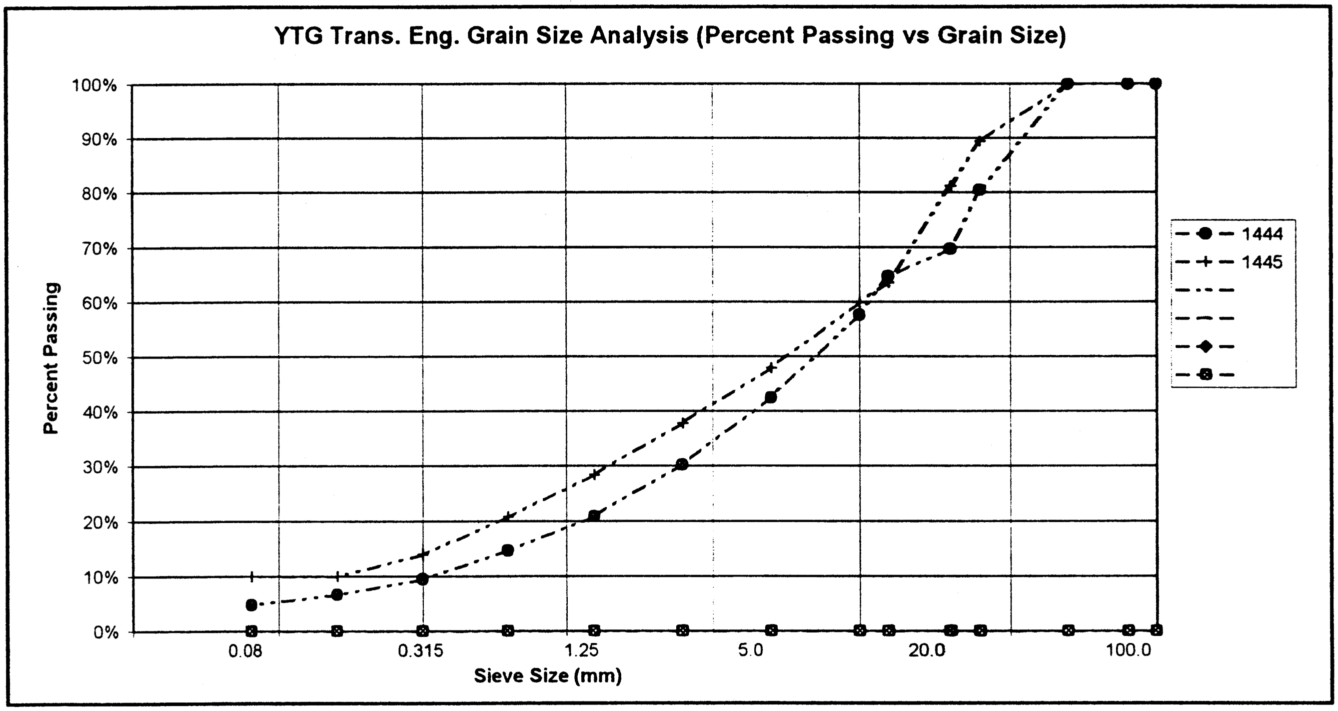


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Lewis Creek Channel
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 625-1956

DATE COMP: 2001/09/25

FIELD NO:	1444	1445				
LAB NO:	2224	2225				
DEPTH:	1.0-2.0	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	81%	89%				
20.0	70%	81%				
12.5	65%	64%				
10.0	58%	60%				
5.0	42%	48%				
2.5	30%	38%				
1.25	21%	28%				
0.630	15%	21%				
0.315	10%	14%				
0.160	7%	10%				
0.080	5%	10%				
M.C.(%):	2%	2%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	58	52				
% SAND:	38	38				
% FINES:	5	10				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				

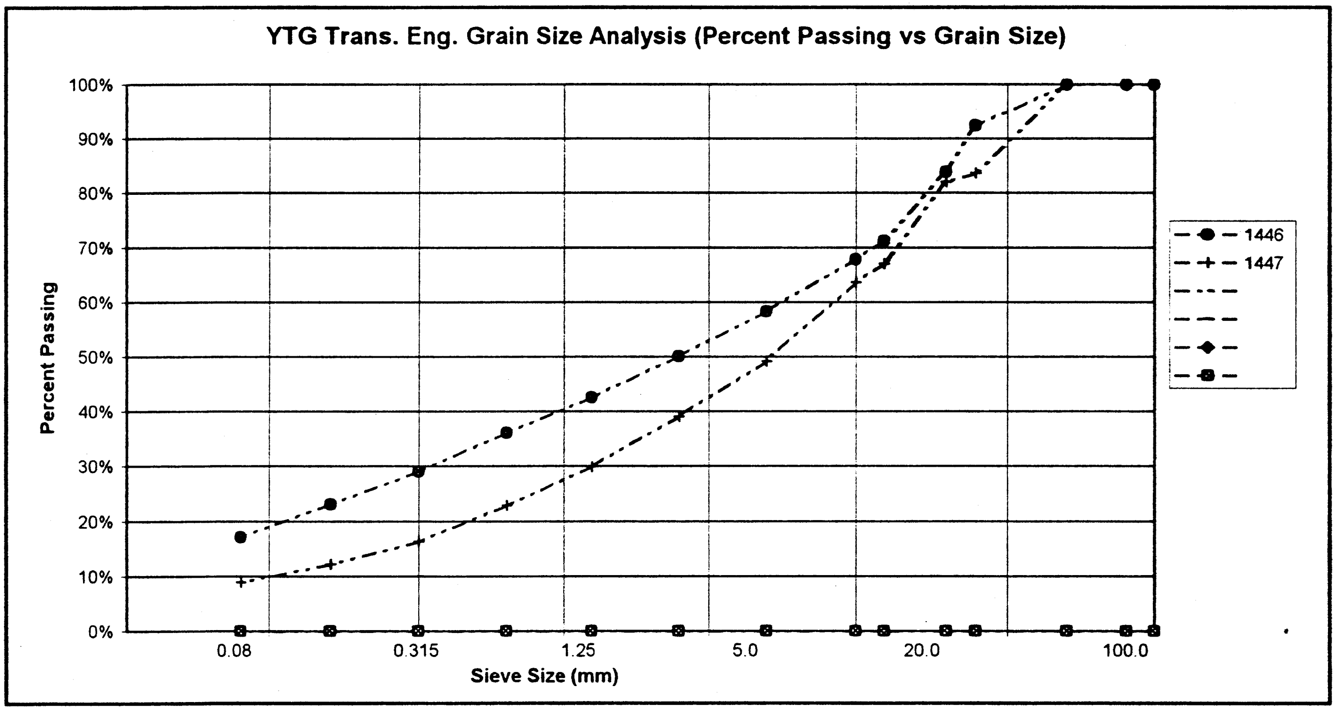

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Lewis Creek Channel
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 625-1957

DATE COMP: 2001/09/25

FIELD NO:	1446	1447				
LAB NO:	2226	2227				
DEPTH:	1.0-2.0	3.5-4.0				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	92%	84%				
20.0	84%	82%				
12.5	71%	67%				
10.0	68%	64%				
5.0	58%	49%				
2.5	50%	39%				
1.25	43%	30%				
0.630	36%	23%				
0.315	29%	16%				
0.160	23%	12%				
0.080	17%	9%				
M.C.(%):	7%	3%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	42	51				
% SAND:	41	40				
% FINES:	17	9				
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				



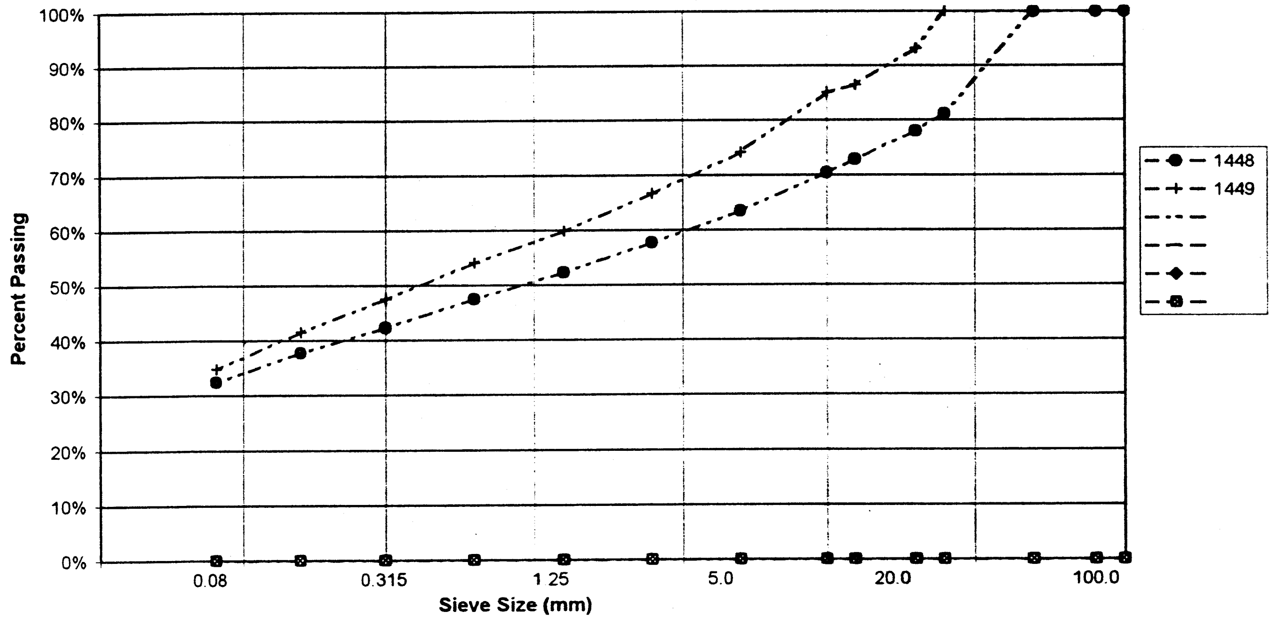
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Lewis Creek Channel
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 625-1958

DATE COMP: 2001/09/25

FIELD NO:	1448	1449				
LAB NO:	2228	2229				
DEPTH:	1.0-2.0	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	81%	100%				
20.0	78%	93%				
12.5	73%	87%				
10.0	70%	85%				
5.0	63%	74%				
2.5	58%	67%				
1.25	52%	60%				
0.630	47%	54%				
0.315	42%	48%				
0.160	38%	42%				
0.080	32%	35%				
M.C.(%):	6%	6%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	37	26				
% SAND:	31	39				
% FINES:	32	35				
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)				

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

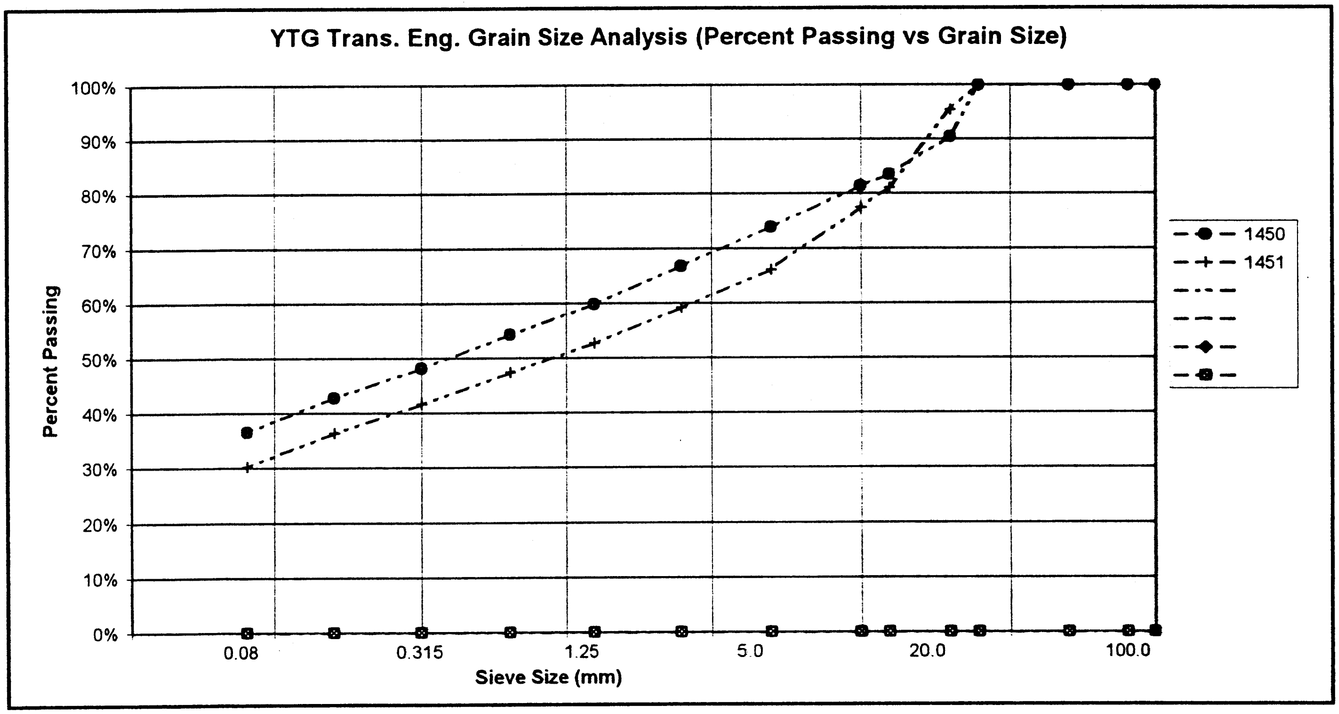


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Lewis Creek Channel
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 625-1959

DATE COMP: 2001/09/25

FIELD NO:	1450	1451				
LAB NO:	2230	2231				
DEPTH:	1.0-2.0	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	100%				
20.0	90%	95%				
12.5	84%	81%				
10.0	81%	78%				
5.0	74%	66%				
2.5	67%	59%				
1.25	60%	53%				
0.630	54%	47%				
0.315	48%	42%				
0.160	43%	36%				
0.080	37%	30%				
M.C.(%):	7%	5%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	26	34				
% SAND:	37	36				
% FINES:	37	30				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)				

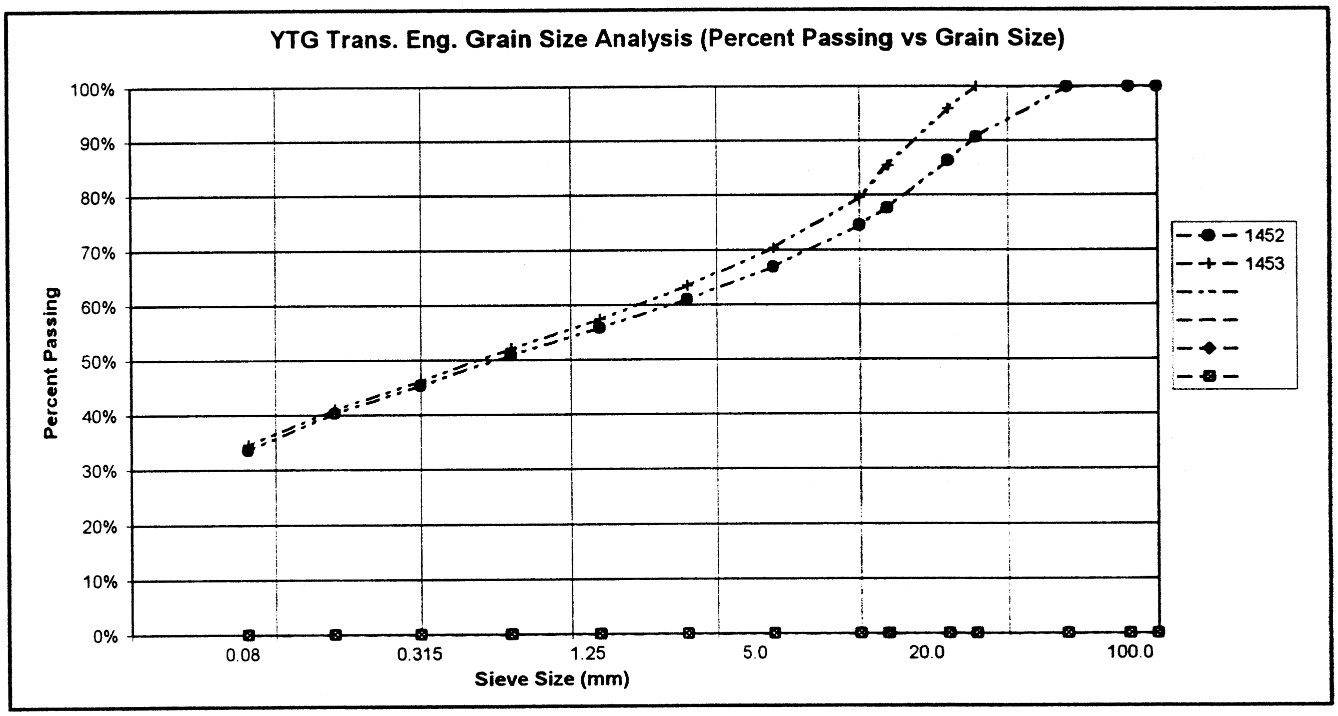


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Lewis Creek Channel
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 625-1960

DATE COMP: 2001/09/25

FIELD NO:	1452	1453				
LAB NO:	2232	2233				
DEPTH:	1.0-2.0	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	91%	100%				
20.0	86%	96%				
12.5	78%	85%				
10.0	75%	80%				
5.0	67%	70%				
2.5	61%	63%				
1.25	56%	57%				
0.630	51%	52%				
0.315	45%	46%				
0.160	40%	41%				
0.080	34%	35%				
M.C.(%):	5%	6%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	33	30				
% SAND:	33	36				
% FINES:	34	35				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)				



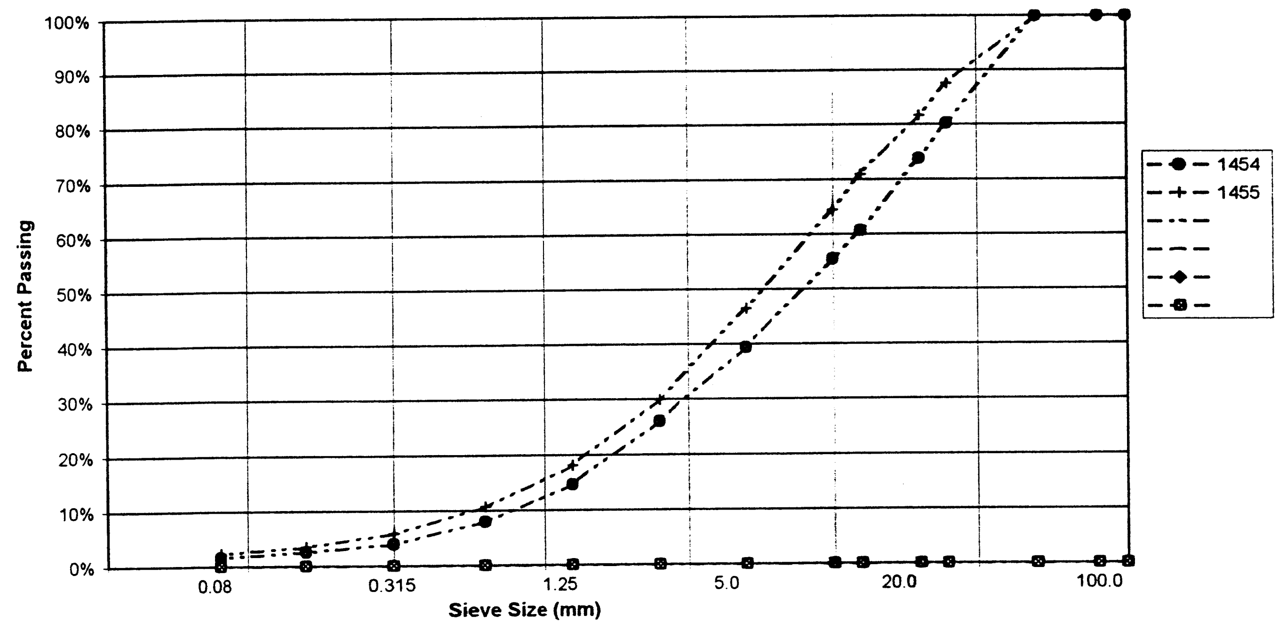
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Lewis Creek Channel
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 625-1961

DATE COMP: 2001/09/25

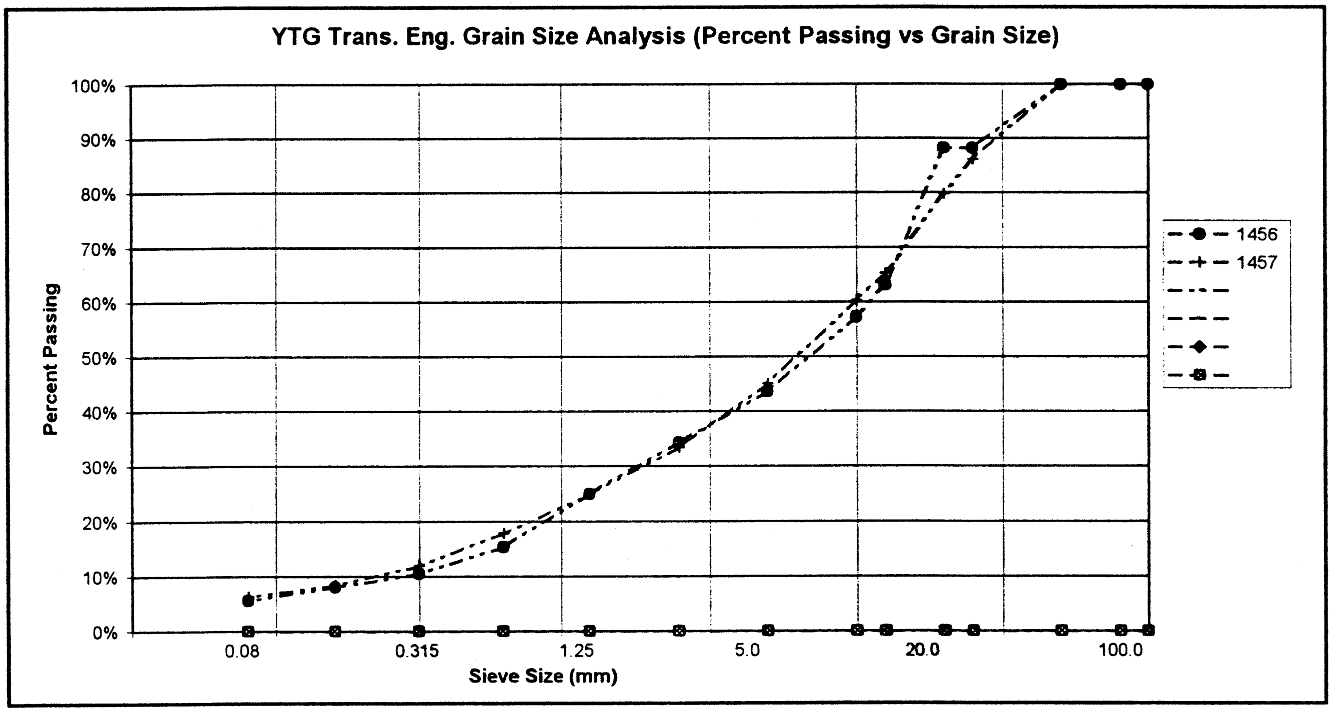
FIELD NO:	1454	1455				
LAB NO:	2234	2235				
DEPTH:	1.0-2.0	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	80%	88%				
20.0	74%	82%				
12.5	61%	71%				
10.0	55%	64%				
5.0	39%	46%				
2.5	26%	30%				
1.25	15%	18%				
0.630	8%	11%				
0.315	4%	6%				
0.160	3%	4%				
0.080	2%	2%				
M.C.(%):	8%	10%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	61	54				
% SAND:	38	44				
% FINES:	2	2				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)				

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0361-1
HOLE No.: 625-1962
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Lewis Creek Channel
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.
DATE COMP: 2001/09/25

FIELD NO:	1456	1457				
LAB NO:	2237	2238				
DEPTH:	1.0-2.0	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	88%	86%				
20.0	88%	80%				
12.5	63%	65%				
10.0	57%	60%				
5.0	44%	45%				
2.5	34%	33%				
1.25	25%	25%				
0.630	15%	18%				
0.315	11%	12%				
0.160	8%	8%				
0.080	6%	6%				
M.C.(%):	3%	3%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	56	55				
% SAND:	38	39				
% FINES:	6	6				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				


YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

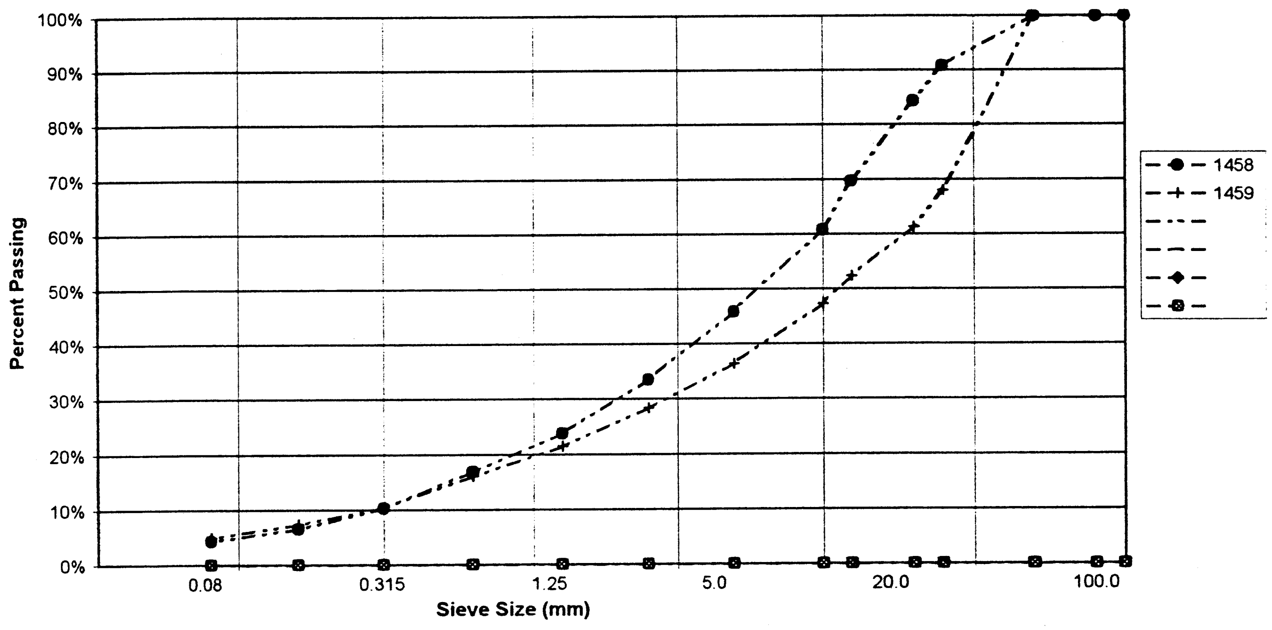
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Lewis Creek Channel
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 625-1963

DATE COMP: 2001/09/25

FIELD NO:	1458	1459				
LAB NO:	2236	2239				
DEPTH:	1.0-2.0	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	91%	68%				
20.0	84%	61%				
12.5	70%	52%				
10.0	61%	47%				
5.0	46%	36%				
2.5	34%	28%				
1.25	24%	21%				
0.630	17%	16%				
0.315	10%	10%				
0.160	7%	7%				
0.080	4%	5%				
M.C.(%):	2%	2%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	54	64				
% SAND:	42	31				
% FINES:	4	5				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)				

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

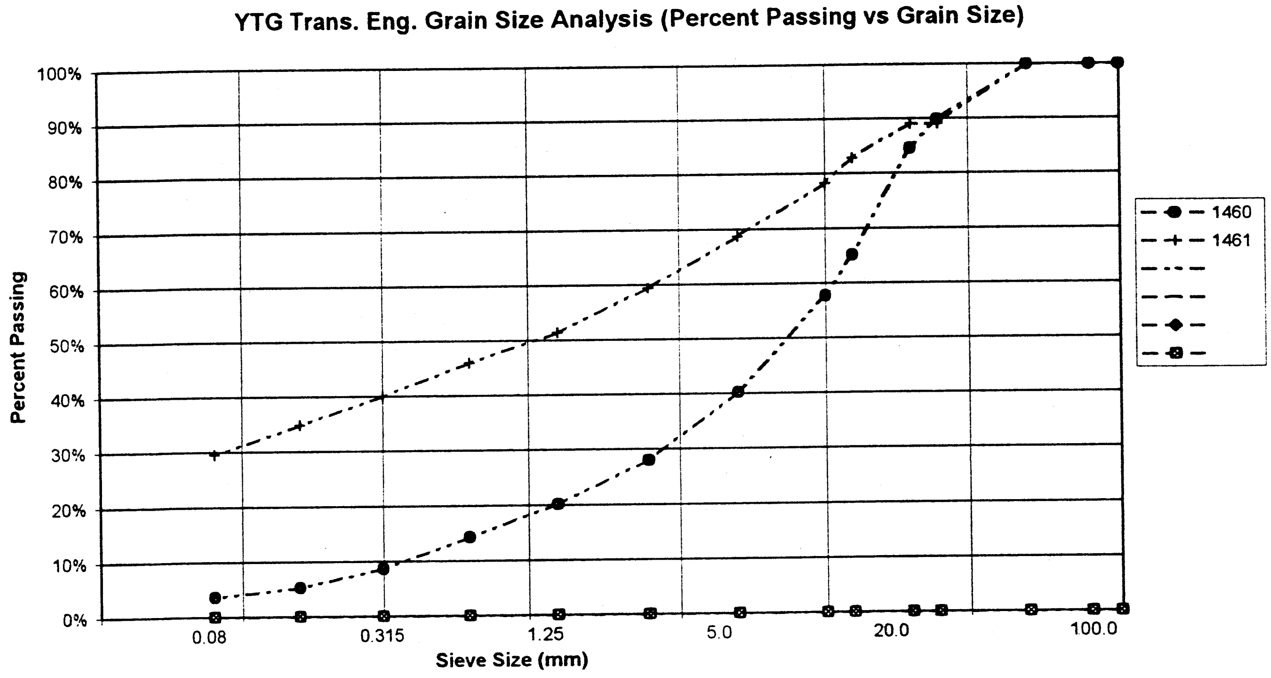


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: Lewis Creek Channel
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: See Testhole Log Sheet
LOGGED BY: G.C.

HOLE No.: 625-1964

DATE COMP: 2001/09/25

FIELD NO:	1460	1461				
LAB NO:	2240	2241				
DEPTH:	1.0-2.0	3.5-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	90%	89%				
20.0	85%	89%				
12.5	65%	83%				
10.0	58%	78%				
5.0	40%	69%				
2.5	28%	59%				
1.25	20%	51%				
0.630	14%	46%				
0.315	9%	40%				
0.160	5%	35%				
0.080	4%	30%				
M.C.(%):	2%	19%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	60	31				
% SAND:	37	39				
% FINES:	4	30				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY SAND WITH GRAVEL (SM)				



Pit 115 G-04
Km 1750 LHS Alaska Highway

1985
Test Pit Logs

Canada

WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT 808-108

PROJECT/SECTION

HOLE No. ~~85-108~~

HOLE LOCATION

ELEV.

DEPTH TO G.W.L.

DATE DRILLED 85-06-27

DRILL UNIT BACKHOE

TECHNICIAN D.S.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASS. or G.W.L.	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm	O – % MOISTURE CONTENT X – % < .074mm PLASTIC LIMIT ⊢—⊣ LIQUID LIMIT 0 10 20 30 40 50 60 70 80 90 100
1	POORLY GRADED GRAVEL WITH SAND - GREY										
2	ESTI. 20% COBBLES 10 TO 20 cm. Ø										
	HARD DIGGING - DK. GREY	[illegible]	PIT RUN	255	2962	GP	57.4	39.4	—		X NP
			CRUSH	255	2962	GW	55.4	44.1	—		X NP C.K.=83.9%
3	END HOLE										
4											
5											
6											
7											
8											
9											
10											

Public Works Canada

WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT 808-109

PROJECT/SECTION		HOLE No.	~~85-109~~
HOLE LOCATION	ELEV.	DEPTH TO G.W.L.	
DATE DRILLED 85-06-28	DRILL UNIT BACKHOE	TECHNICIAN	D.S.

O – % MOISTURE CONTENT

X – % < .074mm

PLASTIC LIMIT ├─┤ LIQUID LIMIT

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASS. or G.W.L.	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm	0 10 20 30 40 50 60 70 80 90 100
	TOPSOIL -DK. BROWN										
1	10% 10 TO 15 cm. ø -DK. GREY										
	WELL-GRADED GRAVEL WITH SAND -BROWN		PIT RUN	256	2963	GW	68.7	28.5	—		x NP
			CRUSH	256	2963	GW	56.7	39.7	—		x NP C.C.=72.4%
2	-HARDER DIGGING MINUS 20 cm. ø FINER -DK. BROWN	— — UNCLASSIFIED									
			PIT RUN	257	2964	GW	68.3	28.3	—		x NP
			CRUSH	257	2964	GW	61.8	34.2	—		x NP C.C.=77.8%
3	END HOLE										
4											
5											
6											
7											
8											
9											
10											

Public Works Canada

WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT 808-110

PROJECT/SECTION

HOLE No. ~~85-110~~

HOLE LOCATION

ELEV.

DEPTH TO G.W.L.

DATE DRILLED 85-06-28

DRILL UNIT BACKHOE

TECHNICIAN D.S.

O – % MOISTURE CONTENT
X – % < .074mm
PLASTIC LIMIT ⊢⊣ LIQUID LIMIT

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASS. or G.W.L.	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm	0 10 20 30 40 50 60 70 80 90 100
	TOPSOIL - BROWN										
	15% 10 TO 20 cm. ⌀ MTL.										
1	POORLY GRADED GRAVEL WITH SILT AND SAND - BROWN										
2	20% 10 TO 20 cm. ⌀ MTL.		P.T. RUN	258	2965	GP-GM	73.1	15.5	—		X NP
	- HARD DIGGING	Vc	CRUSH	258	2965	GW	55.6	40.2	—		X NP C.K.=62.6%
	END HOLE										
3											
4											
5											
6											
7											
8											
9											
10											

Public Works Canada

WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT 808-111

PROJECT/SECTION

HOLE No. 85-111

HOLE LOCATION

ELEV.

DEPTH TO G.W.L.

DATE DRILLED 85-06-28

DRILL UNIT BACKHOE

TECHNICIAN D.S.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASS. or G.W.L.	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm	0 – % MOISTURE CONTENT x – % < .074mm PLASTIC LIMIT ⊢⊣ LIQUID LIMIT 0 10 20 30 40 50 60 70 80 90 100
0	TOPSOIL - DK.BROWN										
	ESTI 25% 10 TO 15 cm. ∅ - DK.GREY										
1											
2	20% 10 TO 20 cm. ∅ WELL-GRADED GRAVEL WITH SAND		PIT RUN	259	2966	GW	72.5	26.2	—		x NA
			CRUSH	259	2966	GW	67.8	30.4	—		x NA C.C.=80.7%
	HAND DIGGING @ 2.6 m.	[illegible]									
	END HOLE										
3											
4											
5											
6											
7											
8											
9											
10											

Public Works
Canada

WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

808-112

PROJECT/SECTION		HOLE No.	~~85-112~~
HOLE LOCATION	ELEV.	DEPTH TO G.W.L.	
DATE DRILLED 85-06-28	DRILL UNIT BACKHOE	TECHNICIAN	D.S.

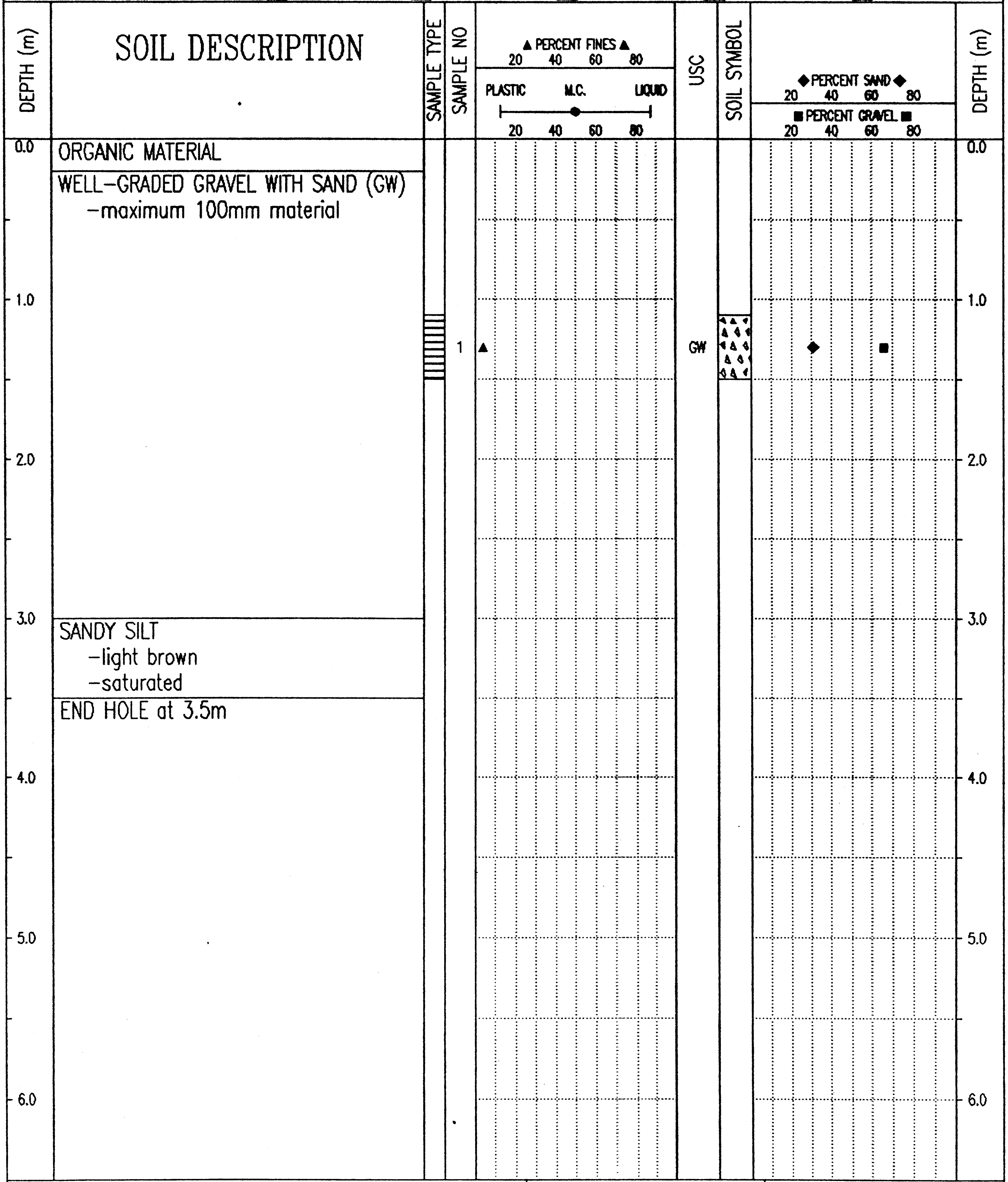
DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASS. or G.W.L.	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm	O-% MOISTURE CONTENT X-% < .074mm PLASTIC LIMIT ├─┤ LIQUID LIMIT 0 10 20 30 40 50 60 70 80 90 100
	TOPSOIL - DK. BROWN										
1	MINUS 8.0 CM. FINER										
2	WELL-GRADED GRAVEL WITH SAND 15% 10-15 CM. ϕ		PIT RUN	260	2967	GW	70.4	27.8	—		x NP
			CRUSH	260	2967	GW	65.4	32.5	—		x NP C.C.=81.1%
		Vx									
3	END HOLE										
4											
5											
6											
7											
8											
9											
10											

Pit 115 G-04
Km 1750 LHS Alaska Highway

1988
Test Pit Logs

SUBSURFACE EXPLORATION AND TEST REPORT
ALASKA HIGHWAY PRE-ENGINEERING
TEST PIT NO: 029-01
PWC CAPITAL - Y.T.
A/H KM 1749.5 LHS
Project No: 115-G-04
BACKHOE: CAT 225
LOCATION: See Plan
ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ‖ TUBE ▮ CORE



DEPTH (m)	SOIL DESCRIPTION
0.0	ORGANIC MATERIAL
	WELL-GRADED GRAVEL WITH SAND (GW) -maximum 100mm material
3.0	SANDY SILT -light brown -saturated
3.5	END HOLE at 3.5m

Government of Yukon
Transportation Engineering

LOGGED BY: DT
REVIEWED BY:
Fig. No:
COMPLETION DEPTH: 3.5 m
COMPLETE: 88/10/19
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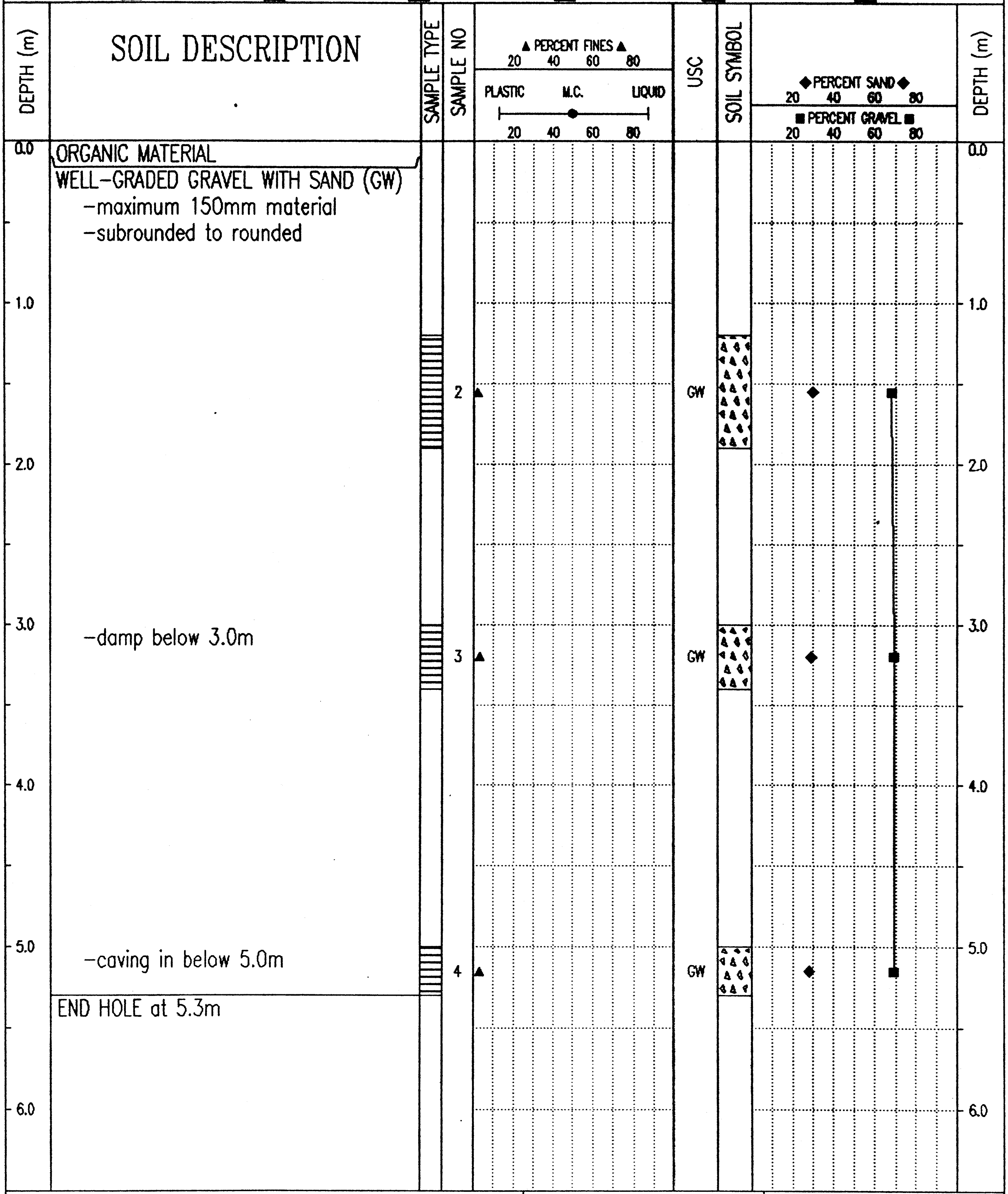
02/03/22 11:19AM

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 029-02
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



ORGANIC MATERIAL

WELL-GRADED GRAVEL WITH SAND (GW)
-maximum 150mm material
-subrounded to rounded

-damp below 3.0m

-caving in below 5.0m

END HOLE at 5.3m

Government of Yukon Transportation Engineering	LOGGED BY: DT	COMPLETION DEPTH: 5.3 m
	REVIEWED BY:	COMPLETE: 88/10/19
	Fig. No:	Page 1 of 1

02/03/22 11:22AM

SUBSURFACE EXPLORATION AND TEST REPORT | ALASKA HIGHWAY PRE-ENGINEERING | TEST PIT NO: 029-03

PWC CAPITAL – Y.T. | A/H KM 1749.5 LHS | Project No: 115-G-04

BACKHOE: CAT 225 | LOCATION: See Plan | ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▥ CORE

DEPTH (m) | SOIL DESCRIPTION

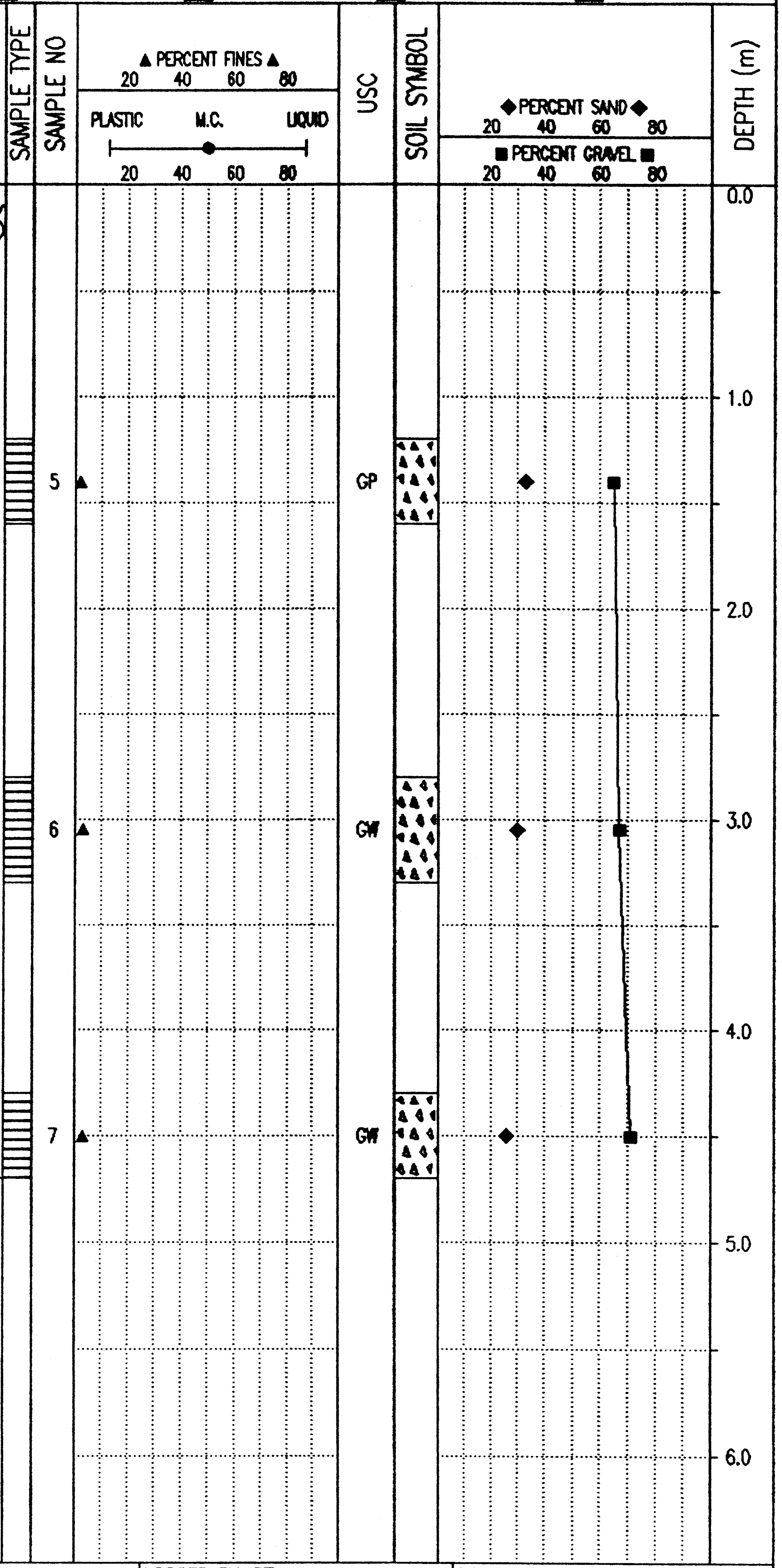
0.0 ORGANIC MATERIAL

POORLY TO WELL-GRADED GRAVEL WITH SAND (GP TO GW)
- maximum 150mm material
- estimate 2-5% +100mm

- maximum 200mm material below 2.4m

- maximum 150mm material below 4.0m
- estimate 2-3% +100mm

END HOLE at 4.7m



Government of Yukon
Transportation Engineering

LOGGED BY: DT
REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 4.7 m
COMPLETE: 88/10/19
Page 1 of 1

02/03/22 11:24AM

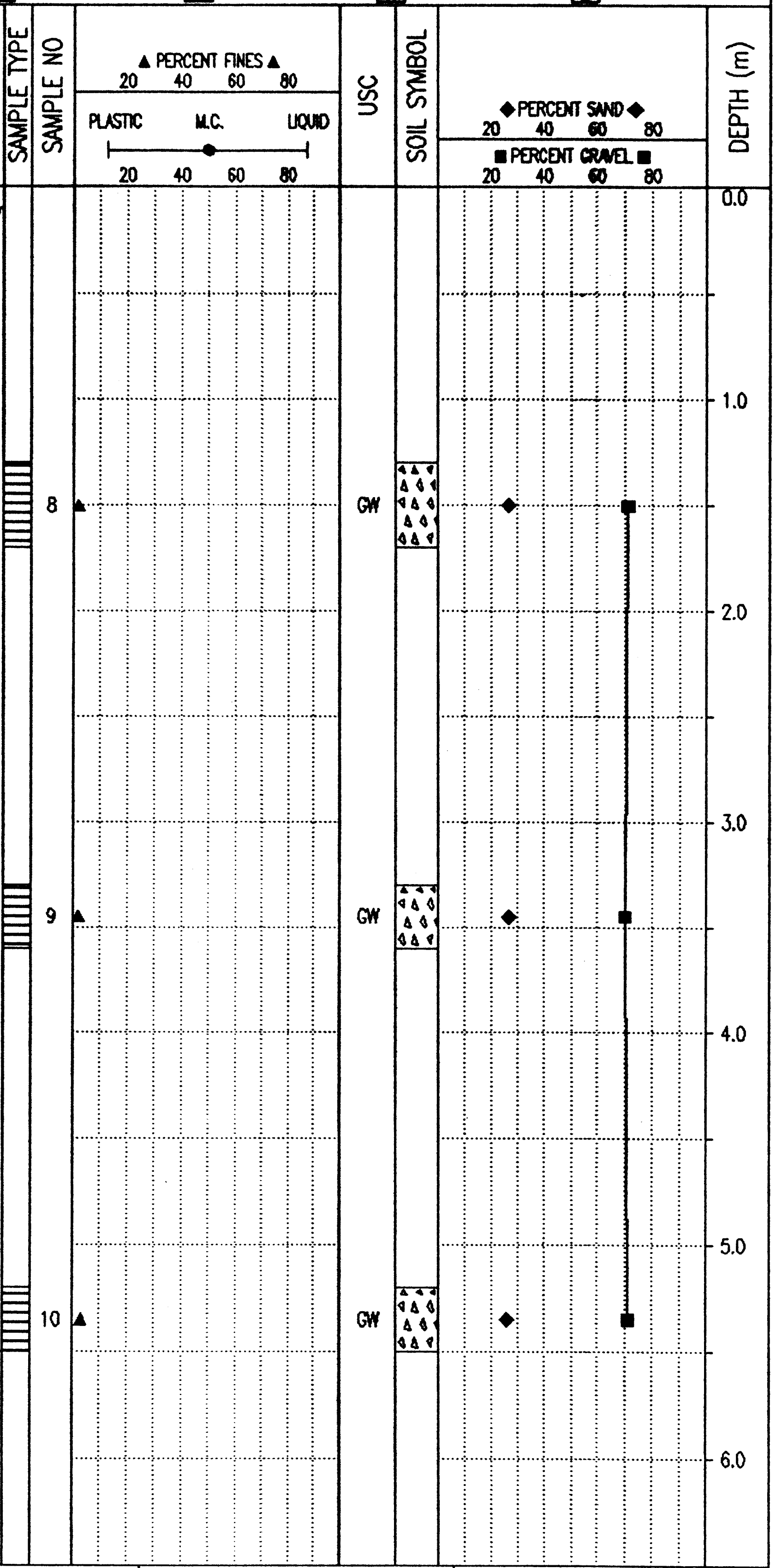
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 029-04
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▯ CORE

SOIL DESCRIPTION

DEPTH (m)	SOIL DESCRIPTION
0.0	ORGANIC MATERIAL
	WELL-GRADED GRAVEL WITH SAND (GW) -maximum 150mm material -estimate 2-3% +100mm
3.0	-estimate 3-5% +100mm below 3.0m
4.4	-estimate 2-3% +100mm below 4.4m
5.5	END HOLE at 5.5m

SAMPLE TYPE	SAMPLE NO	USC
☰	8	GW
☰	9	GW
☰	10	GW



LOGGED BY: DT	COMPLETION DEPTH: 5.5 m
REVIEWED BY:	COMPLETE: 88/10/19
Fig. No:	Page 1 of 1

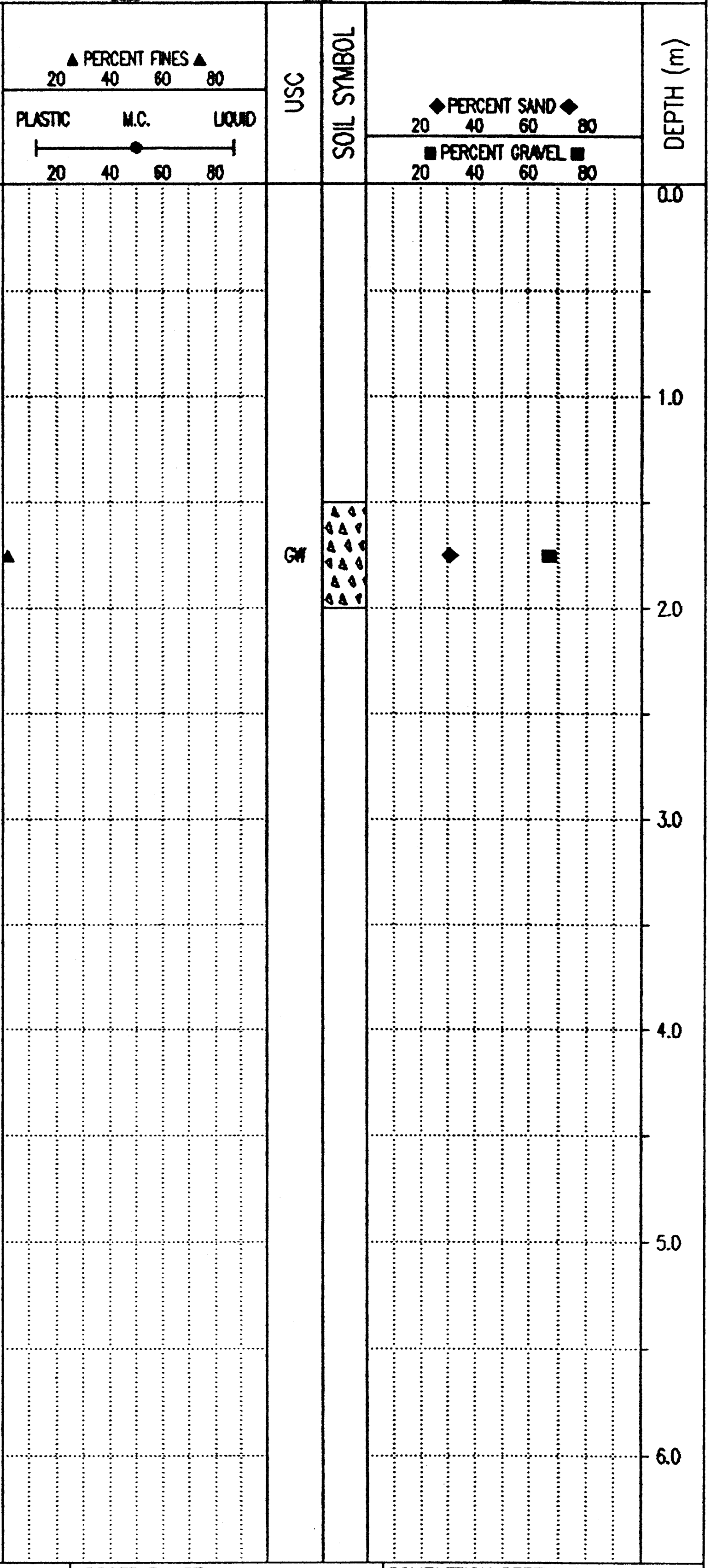
Government of Yukon
Transportation Engineering

02/03/22 11:22AM

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 029-05
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ▤ BULK ◫ TUBE ◫ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC MATERIAL			
	WELL-GRADED GRAVEL WITH SAND (GW) -maximum150mm material -estimate 2-3% +100mm	▤	11	GW
2.0	SANDY SILT -dark brown -wet			
2.7	END HOLE at 2.7m			



Government of Yukon Transportation Engineering	LOGGED BY: DT	COMPLETION DEPTH: 2.7 m
	REVIEWED BY:	COMPLETE: 88/10/19
	Fig. No:	Page 1 of 1

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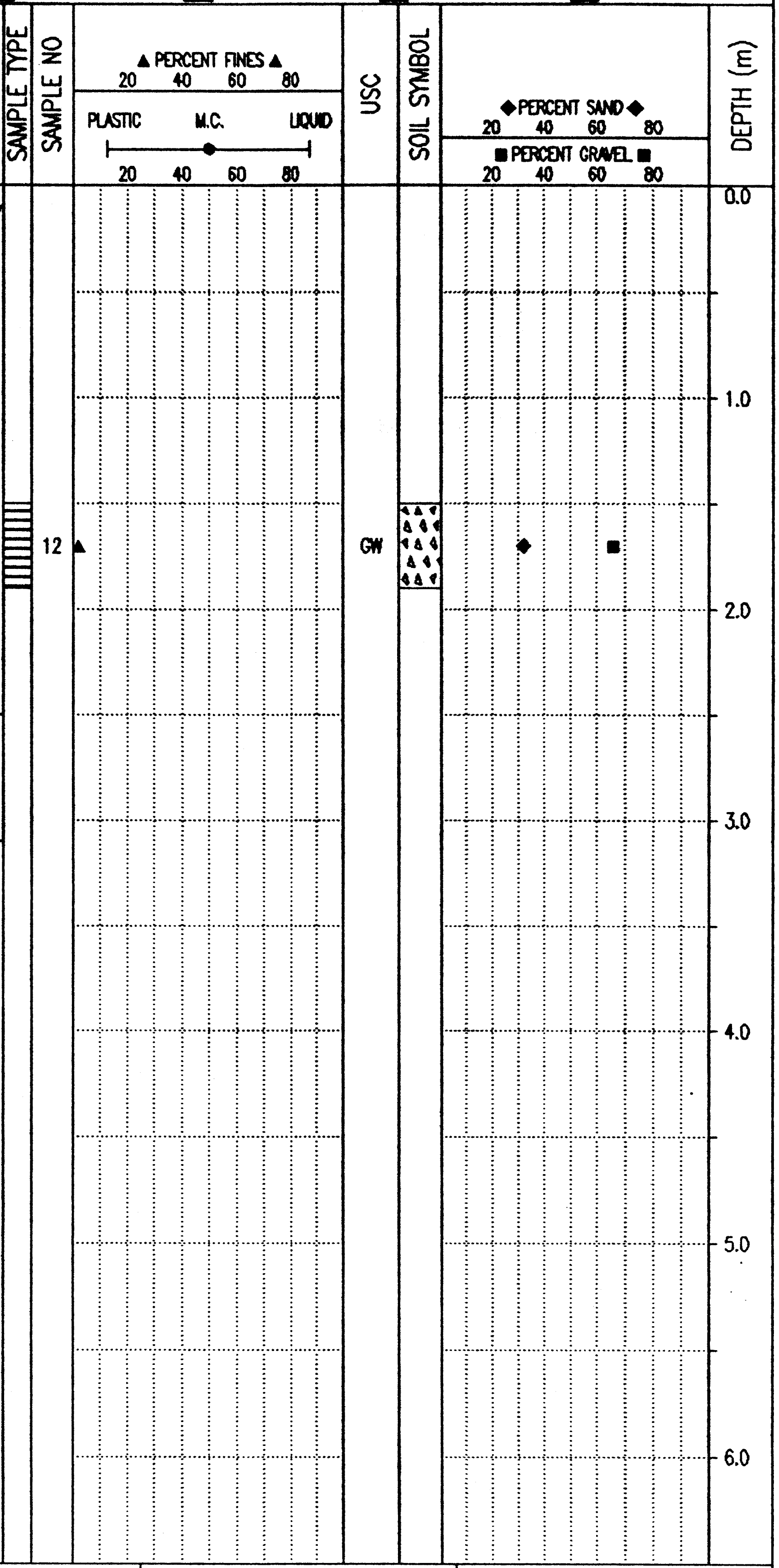
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 029-06
PWC CAPITAL – Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▯ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	ORGANIC MATERIAL
	WELL-GRADED GRAVEL WITH SAND (GW) –maximum100mm material
2.5	SILT –light brown –wet
3.1	END HOLE at 3.1m



Government of Yukon Transportation Engineering	LOGGED BY: DT	COMPLETION DEPTH: 3.1 m
	REVIEWED BY:	COMPLETE: 88/10/19
	Fig. No:	Page 1 of 1

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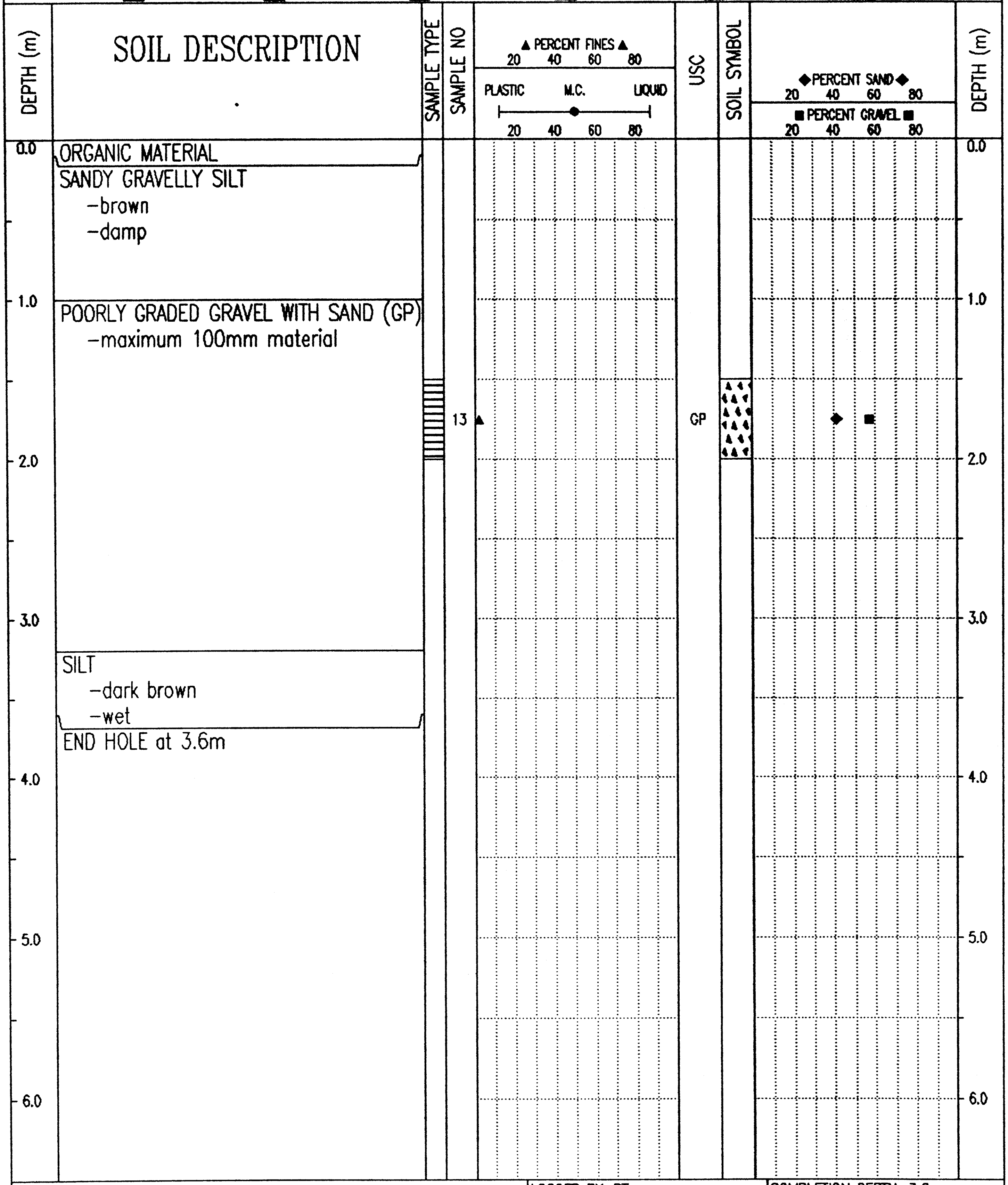
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 029-07
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SOIL DESCRIPTION

0.0 ORGANIC MATERIAL

SANDY GRAVELLY SILT
- brown
- damp

1.0 POORLY GRADED GRAVEL WITH SAND (GP)
- maximum 100mm material

SILT
- dark brown
- wet

END HOLE at 3.6m

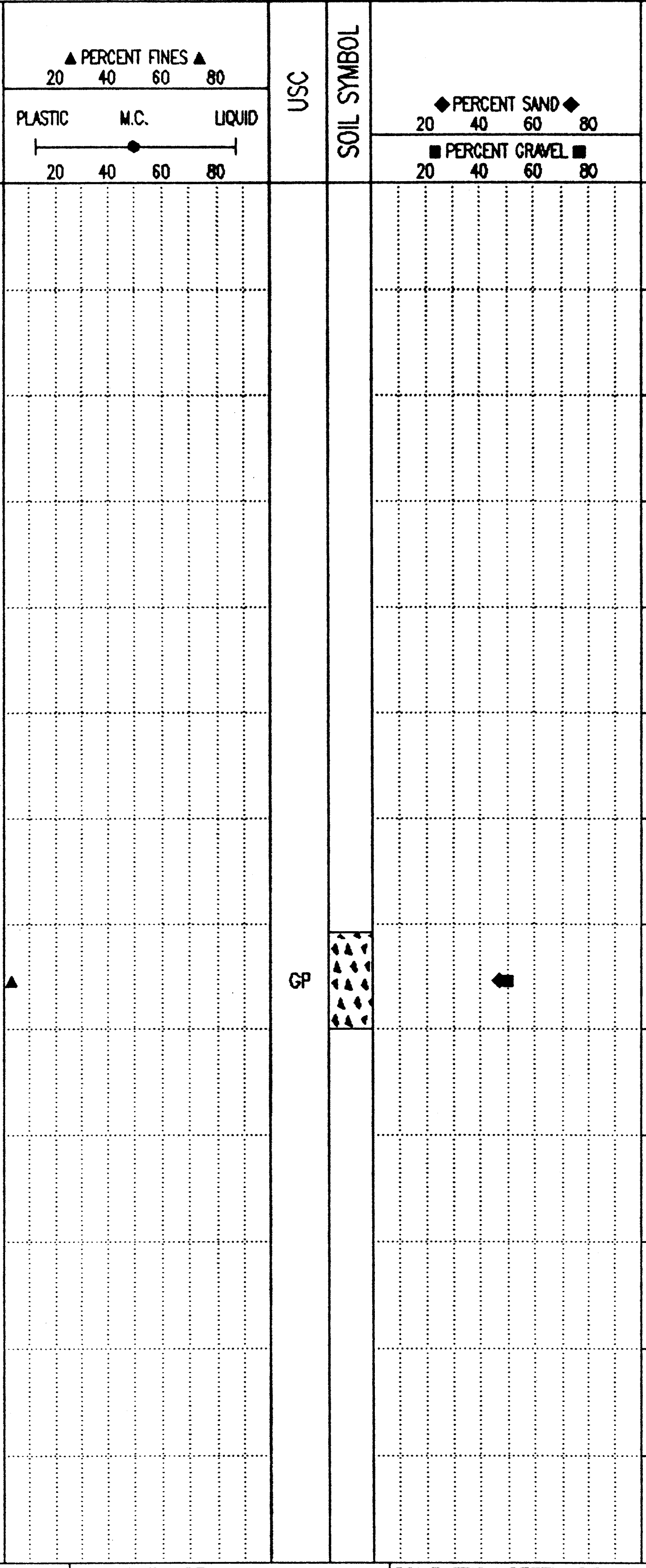
Government of Yukon Transportation Engineering	LOGGED BY: DT	COMPLETION DEPTH: 3.6 m
	REVIEWED BY:	COMPLETE: 88/10/19
	Fig. No:	Page 1 of 1

02/03/22 11:35AM

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 029-08
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◩ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC MATERIAL			
	GRAVELLY SILTY SAND			
	ORGANIC MATERIAL			
	POORLY GRADED GRAVEL WITH SAND -maximum 75mm material			
1.0	-sample lost in transit	☰	14	
2.0				
	SANDY SILT			
3.0	POORLY GRADED GRAVEL WITH SAND (GP) -maximum 75mm material	☰	15	GP
4.0				
5.0	END HOLE at 5.0m			
6.0				

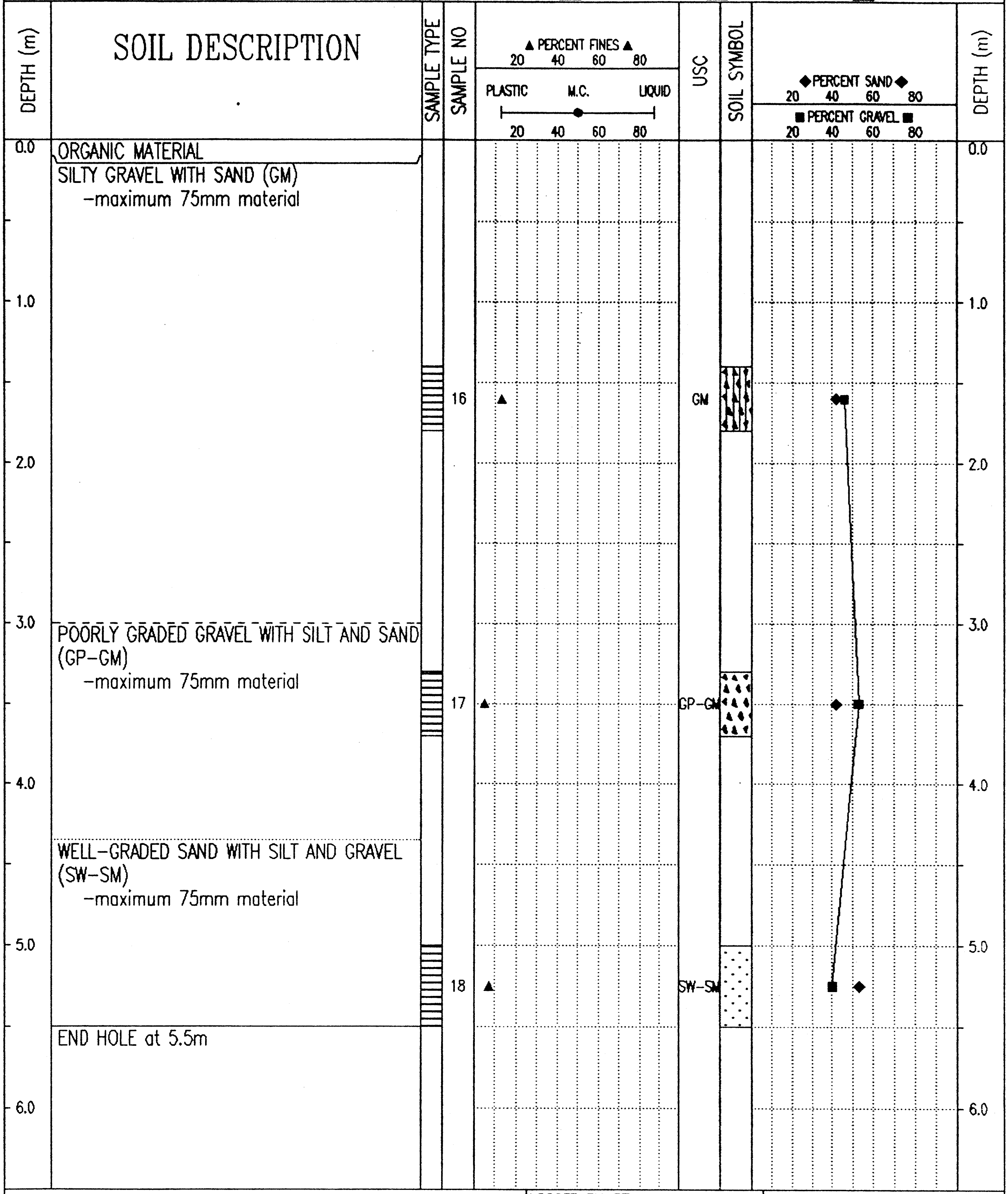


Government of Yukon Transportation Engineering	LOGGED BY: DT	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 88/10/19
	Fig. No:	Page 1 of 1

02/03/22 11:42AM

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 029-09
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



0.0 ORGANIC MATERIAL

SILTY GRAVEL WITH SAND (GM)
-maximum 75mm material

3.0 POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM)
-maximum 75mm material

WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM)
-maximum 75mm material

END HOLE at 5.5m

Government of Yukon
Transportation Engineering

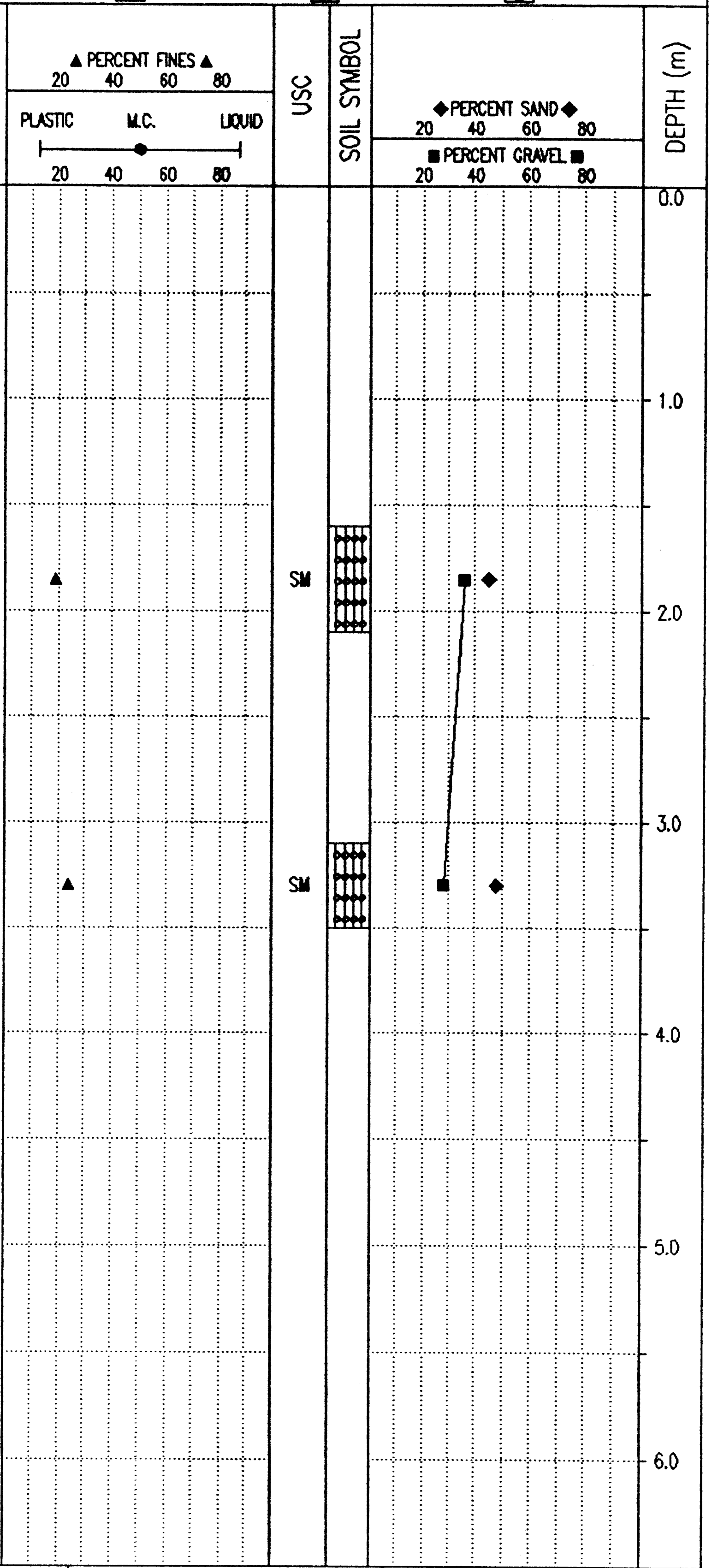
LOGGED BY: DT	COMPLETION DEPTH: 5.5 m
REVIEWED BY:	COMPLETE: 88/10/20
Fig. No:	Page 1 of 1

02/03/22 11:45AM

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 029-10
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◩ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO
0.0	ORGANIC MATERIAL		
	SILTY ORGANIC MATERIAL		
	GRAVELLY SAND		
1.0			
	SILTY SAND WITH GRAVEL (SM)	☰	19
2.0			
3.0		☰	20
	END HOLE at 3.5m		
4.0			
5.0			
6.0			



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LOGGED BY: DT
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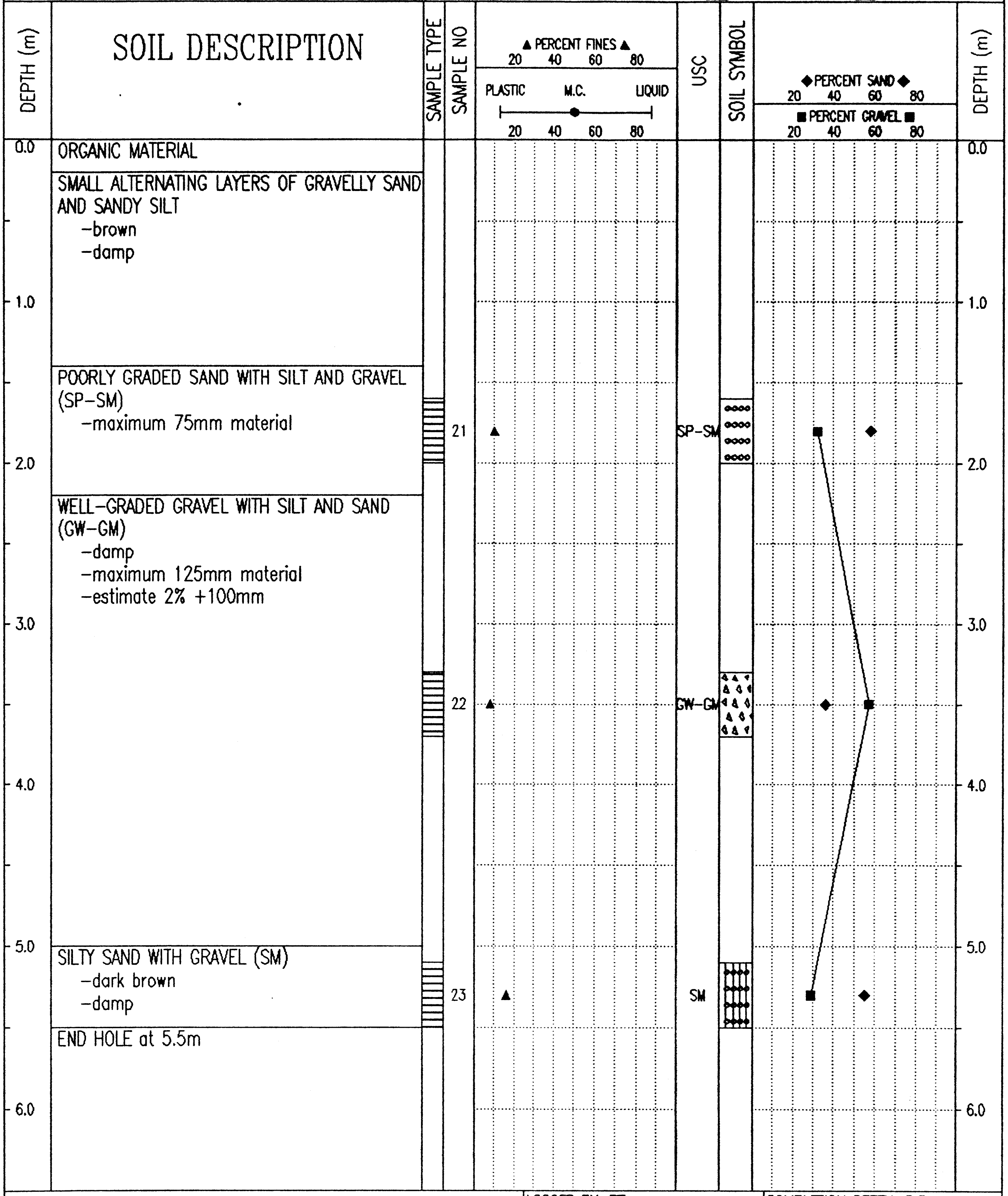
Fig. No:

COMPLETION DEPTH: 3.5 m
COMPLETE: 88/10/20

02/03/22 11:42AM

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 029-11
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ◫ CORE



SOIL DESCRIPTION	SAMPLE NO	USC
ORGANIC MATERIAL		
SMALL ALTERNATING LAYERS OF GRAVELLY SAND AND SANDY SILT -brown -damp		
POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM) -maximum 75mm material	21	SP-SM
WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM) -damp -maximum 125mm material -estimate 2% +100mm	22	GW-GM
SILTY SAND WITH GRAVEL (SM) -dark brown -damp	23	SM
END HOLE at 5.5m		

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LOGGED BY: DT	COMPLETION DEPTH: 5.5 m
REVIEWED BY:	COMPLETE: 88/10/20
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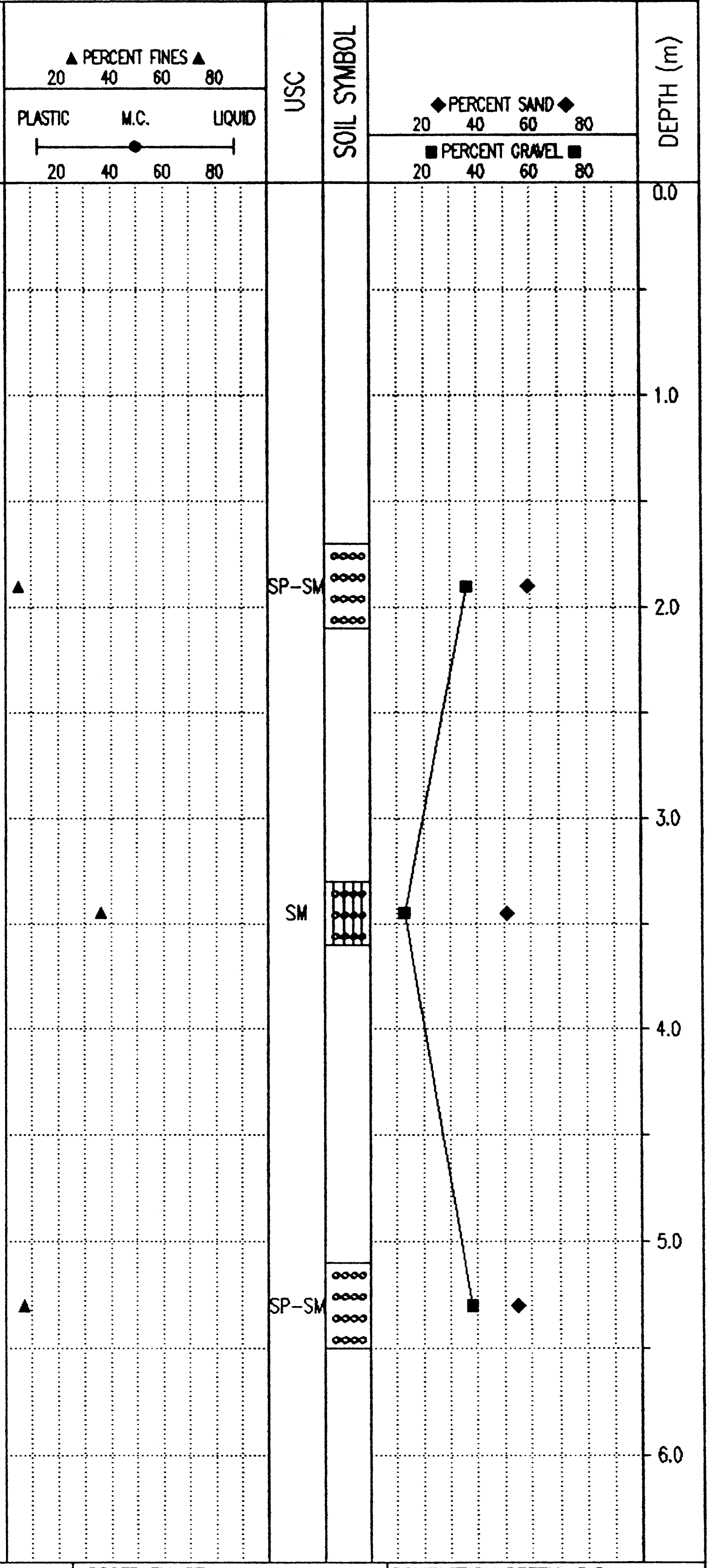
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 029-12
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO
0.0	ORGANIC MATERIAL		
	SILTY GRAVELLY SAND -maximum 75mm material		
1.0	ORGANIC MATERIAL		
	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM) -brown -damp -maximum 75mm material	☰	24
2.0			
	ORGANIC MATERIAL		
	SILTY GRAVELLY SAND		
3.0	ORGANIC MATERIAL		
	SILTY SAND (SM) -light brown -wet	☰	25
4.0	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM) -maximum 25mm material		
5.0		☰	26
	END HOLE at 5.6m		
6.0			



Government of Yukon Transportation Engineering	LOGGED BY: DT	COMPLETION DEPTH: 5.6 m
	REVIEWED BY:	COMPLETE: 88/10/20
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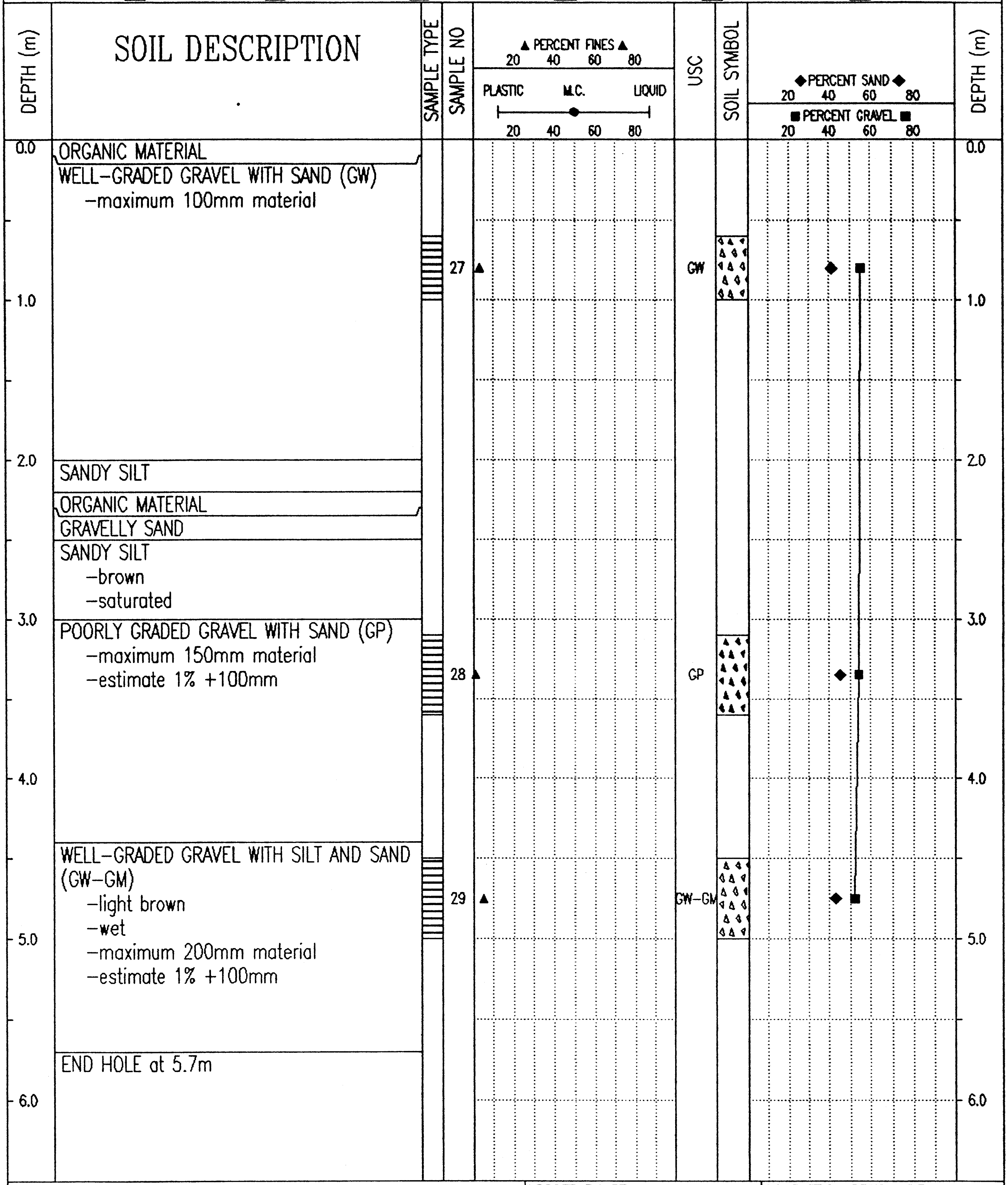
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 029-13
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



ORGANIC MATERIAL

WELL-GRADED GRAVEL WITH SAND (GW)
- maximum 100mm material

SANDY SILT

ORGANIC MATERIAL

GRAVELLY SAND

SANDY SILT
- brown
- saturated

POORLY GRADED GRAVEL WITH SAND (GP)
- maximum 150mm material
- estimate 1% +100mm

WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM)
- light brown
- wet
- maximum 200mm material
- estimate 1% +100mm

END HOLE at 5.7m

Government of Yukon	LOGGED BY: DT	COMPLETION DEPTH: 5.7 m
	REVIEWED BY:	COMPLETE: 88/10/20
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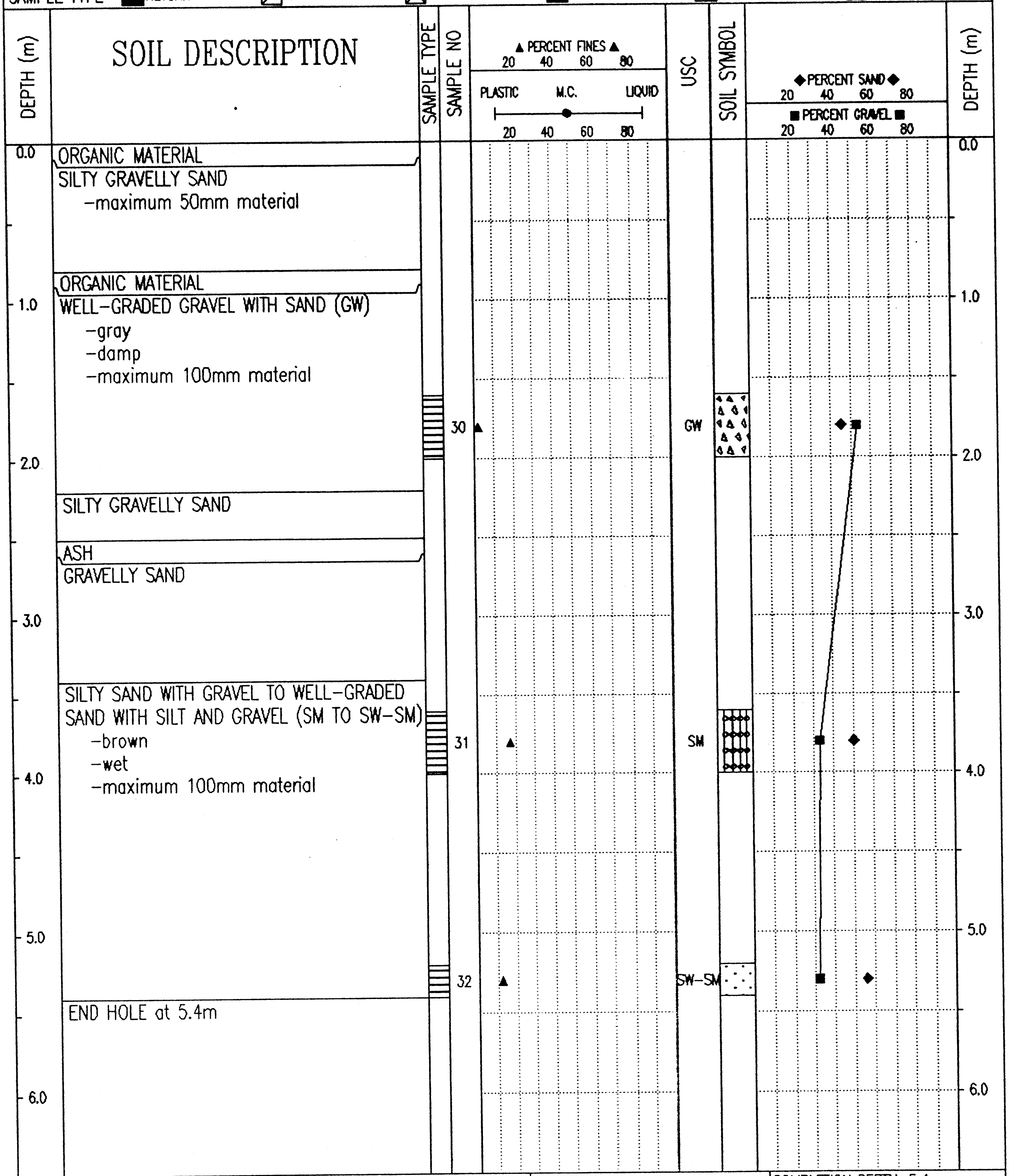
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 029-14
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ◫ CORE



DEPTH (m)	SOIL DESCRIPTION	SAMPLE NO	USC
0.0	ORGANIC MATERIAL		
	SILTY GRAVELLY SAND -maximum 50mm material		
	ORGANIC MATERIAL		
1.0	WELL-GRADED GRAVEL WITH SAND (GW) -gray -damp -maximum 100mm material	30	GW
	SILTY GRAVELLY SAND		
	ASH		
	GRAVELLY SAND		
	SILTY SAND WITH GRAVEL TO WELL-GRADED SAND WITH SILT AND GRAVEL (SM TO SW-SM) -brown -wet -maximum 100mm material	31 32	SM SW-SM
	END HOLE at 5.4m		

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LOGGED BY: DT	COMPLETION DEPTH: 5.4 m
REVIEWED BY:	COMPLETE: 88/10/20
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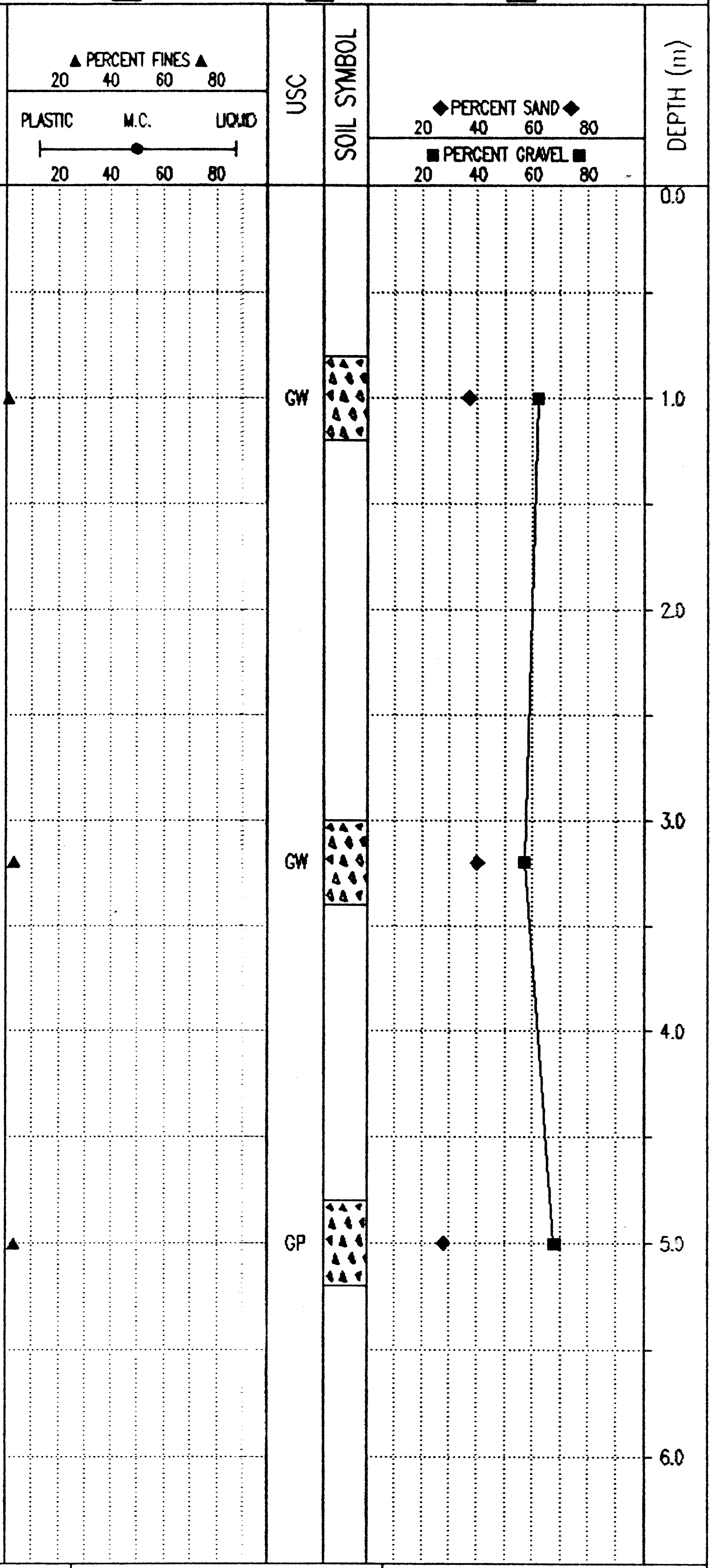
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 029-15
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◩ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC MATERIAL			
	WELL-GRADED GRAVEL WITH SAND (GW) -maximum 100mm material			
1.0		☰	33	GW
	SANDY SILT			
2.0	ASH			
	WELL-GRADED GRAVEL WITH SAND (GW) -maximum 100mm material			
3.0		☰	34	GW
4.0				
	POORLY GRADED GRAVEL WITH SAND (GP) -maximum 200mm material below 4.6m -estimate 2% +100mm			
5.0		☰	35	GP
	END HOLE at 5.2m			
6.0				



Government of Yukon Transportation Engineering	LOGGED BY: DT	COMPLETION DEPTH: 5.2 m
	REVIEWED BY:	COMPLETE: 88/10/20
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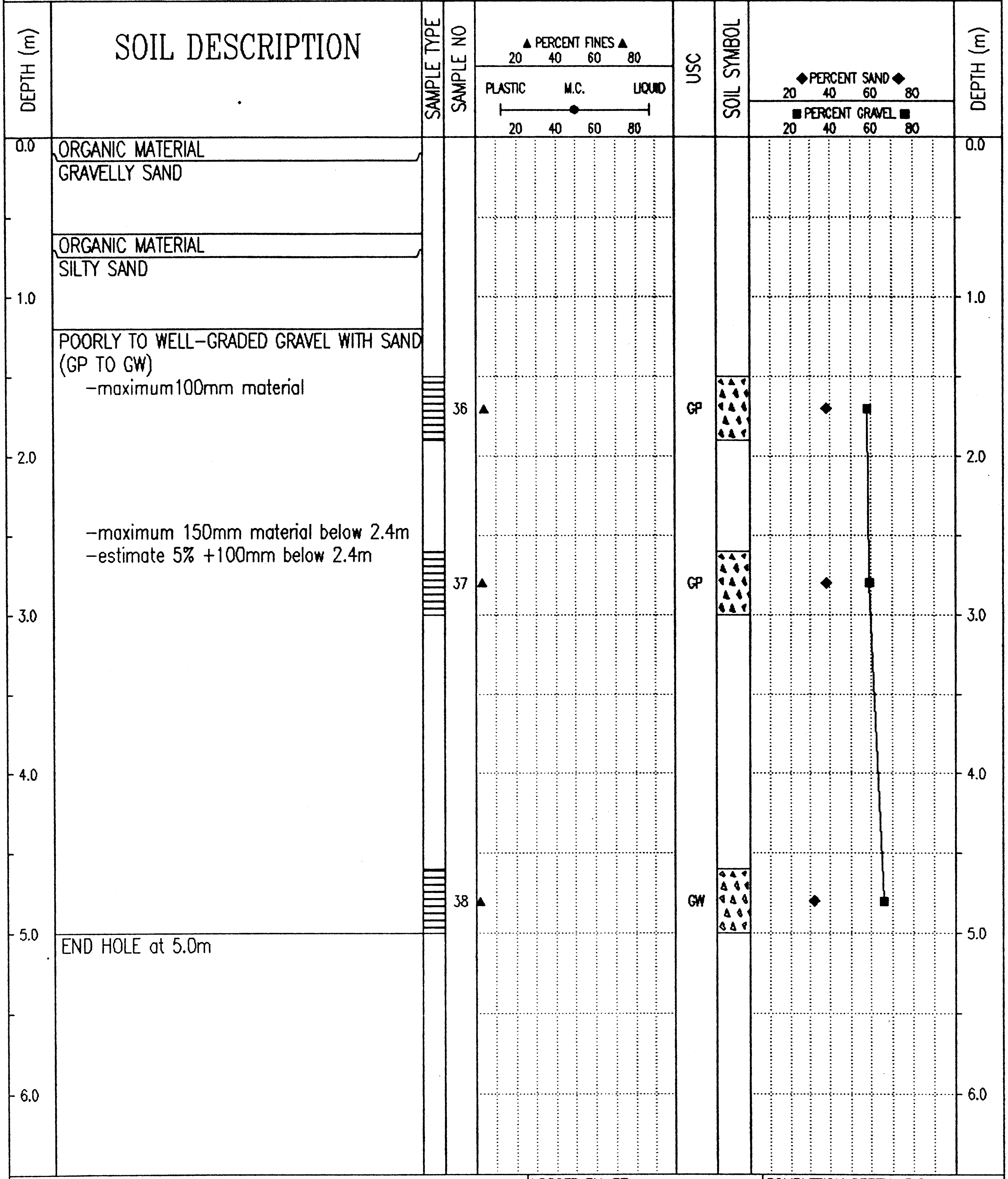
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 029-16
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ◫ CORE



ORGANIC MATERIAL

GRAVELLY SAND

ORGANIC MATERIAL

SILTY SAND

POORLY TO WELL-GRADED GRAVEL WITH SAND (GP TO GW)
- maximum100mm material
- maximum 150mm material below 2.4m
- estimate 5% +100mm below 2.4m

END HOLE at 5.0m

Government of Yukon Transportation Engineering	LOGGED BY: DT	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 88/10/21
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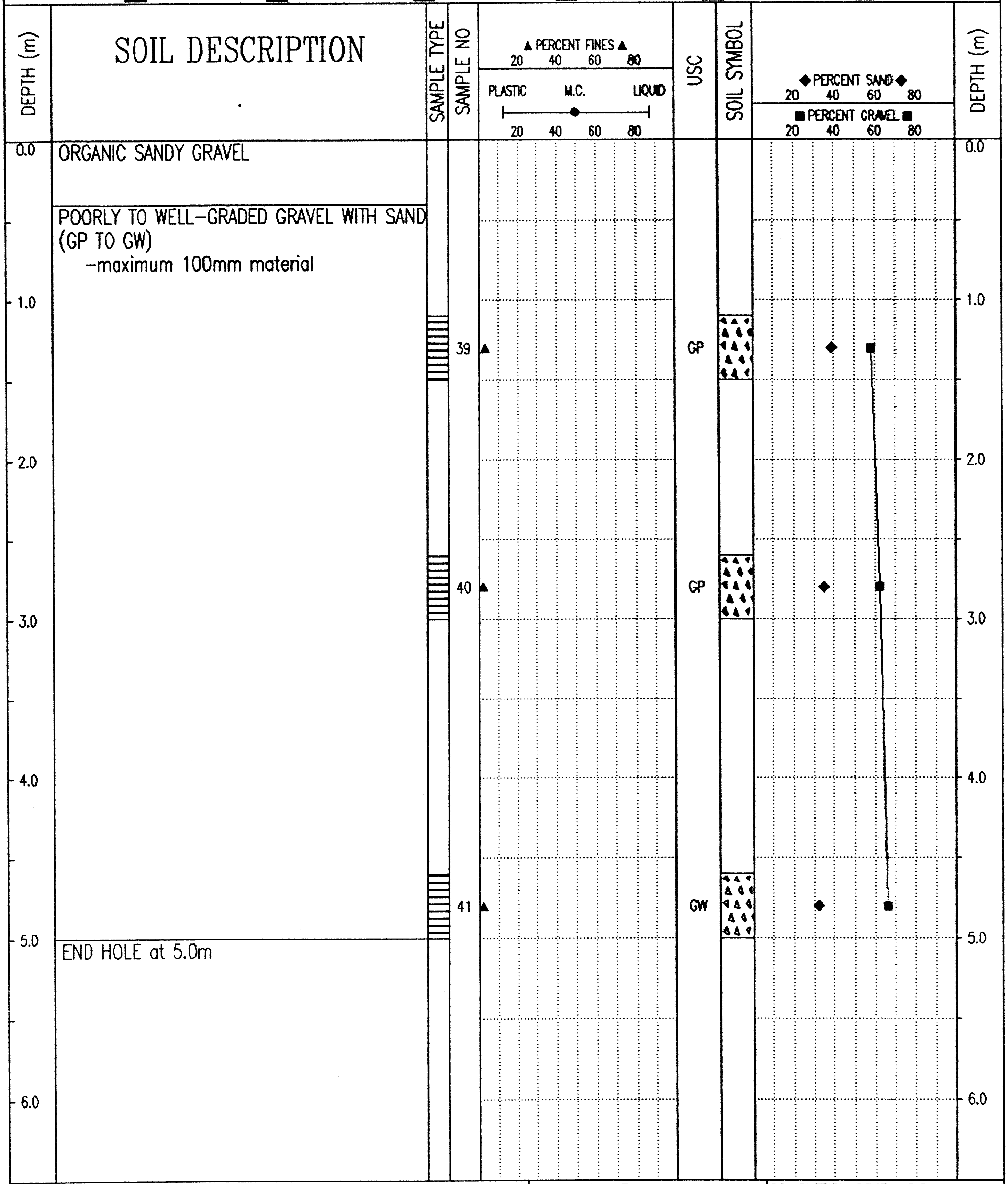
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 029-17
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



0.0 ORGANIC SANDY GRAVEL

POORLY TO WELL-GRADED GRAVEL WITH SAND (GP TO GW)
-maximum 100mm material

5.0 END HOLE at 5.0m

Government of Yukon	LOGGED BY: DT	COMPLETION DEPTH: 5.0 m
Transportation Engineering	REVIEWED BY:	COMPLETE: 88/10/21
	Fig. No:	Page 1 of 1

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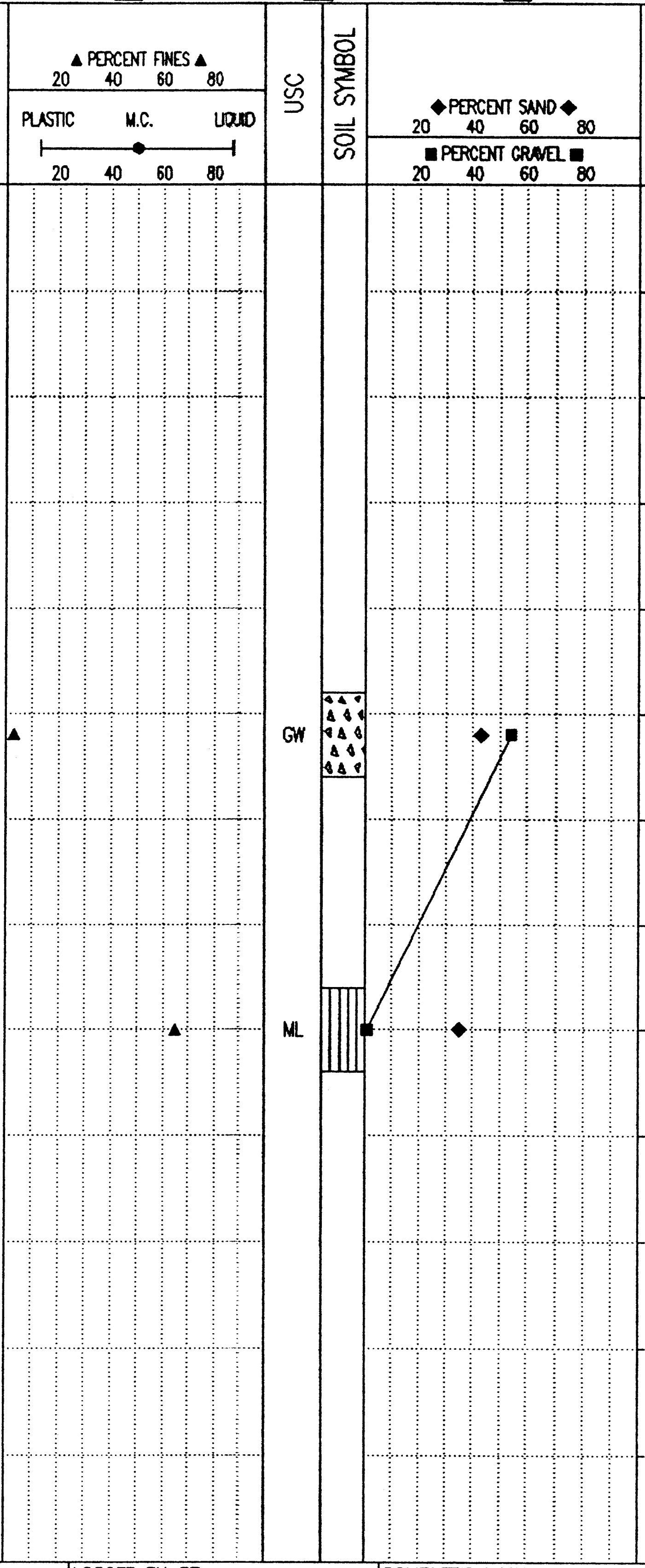
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 029-18
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▯ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	SANDY GRAVEL			
	ORGANIC MATERIAL			
	GRAVELLY SAND			
1.0	ORGANIC SANDY SILT			
	ORGANIC MATERIAL -trees and roots			
2.0	WELL-GRADED GRAVEL WITH SAND (GW) -maximum 150mm material -estimate 1% +100mm	☰	42	GW
3.0	SANDY SILT (ML) -brown -wet	☰	43	ML
4.0	END HOLE at 4.3m -organic materials found at all levels (twigs, logs, stumps)			
5.0				
6.0				



Government of Yukon Transportation Engineering	LOGGED BY: DT REVIEWED BY: Fig. No:
COMPLETION DEPTH: 4.3 m COMPLETE: 88/10/21	Page 1 of 1

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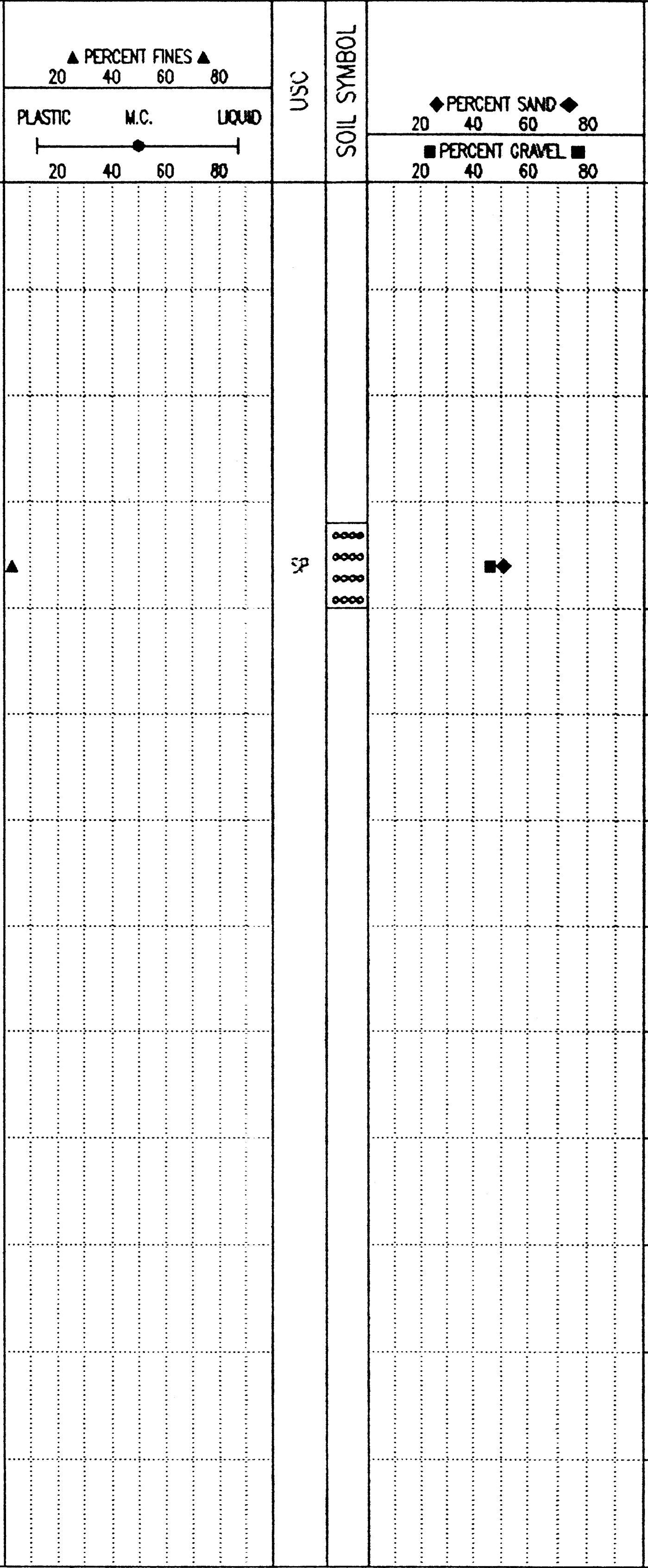
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 029-19
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL
0.0	ORGANIC MATERIAL				
	SANDY GRAVEL				
	SANDY SILT -brown -damp				
1.0	POORLY GRADED SAND WITH GRAVEL (SP) -maximum 75mm material	☰	44	SP	oooo
2.0					
	SANDY SILT -brown -moist -300mm tree trunks				
3.0					
4.0	END HOLE at 4.0m				
5.0					
6.0					



Government of Yukon Transportation Engineering	LOGGED BY: DT	COMPLETION DEPTH: 4.0 m
	REVIEWED BY:	COMPLETE: 88/10/21
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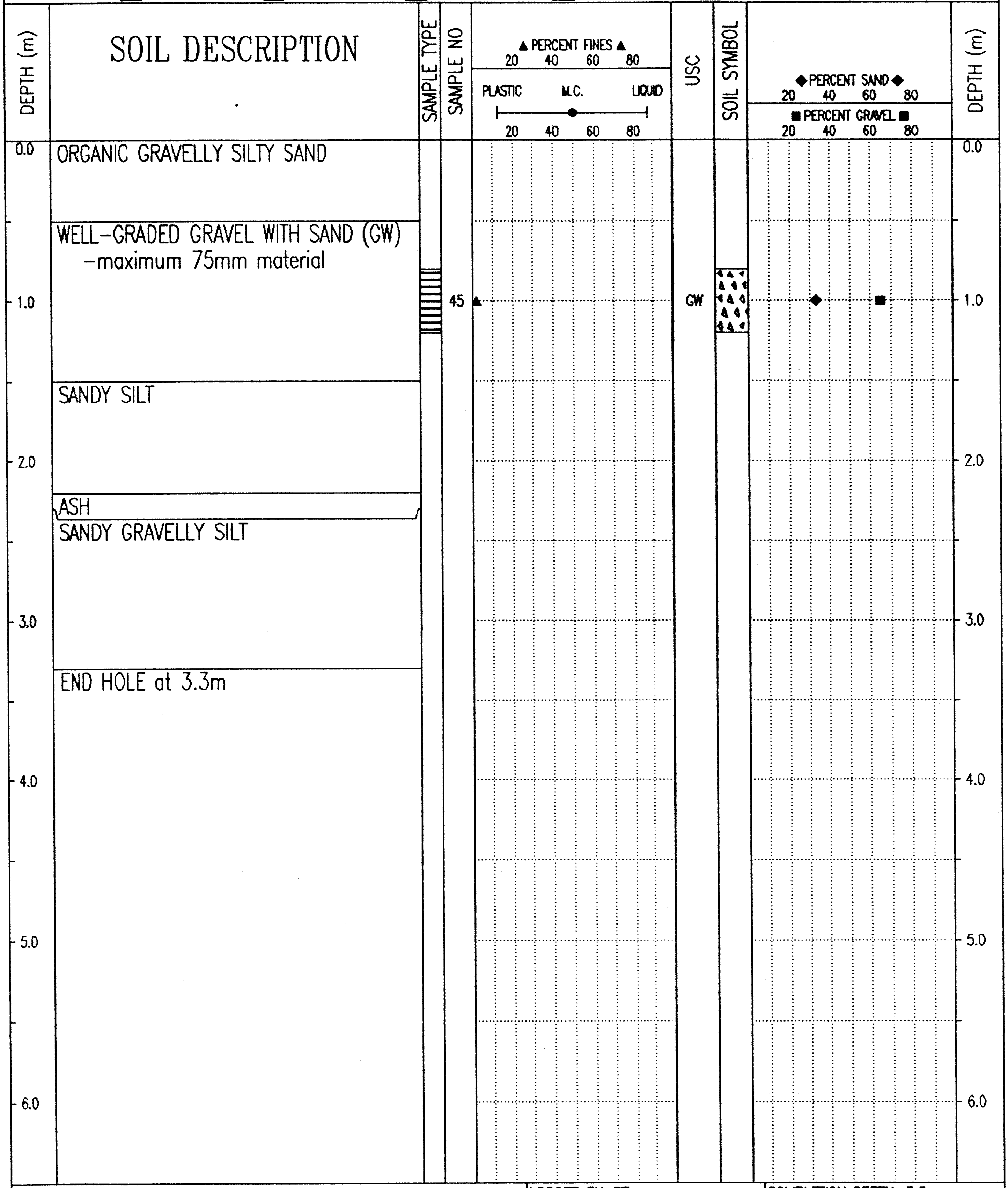
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 029-20
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



ORGANIC GRAVELLY SILTY SAND

WELL-GRADED GRAVEL WITH SAND (GW)
-maximum 75mm material

SANDY SILT

ASH

SANDY GRAVELLY SILT

END HOLE at 3.3m

Government of Yukon Transportation Engineering	LOGGED BY: DT	COMPLETION DEPTH: 3.3 m
	REVIEWED BY:	COMPLETE: 88/10/21
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 029-21
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ◨ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC SILT-gravelly							0.0
	GRAVELLY SAND -maximum 100 mm. -trace silt -sample 46 lost in transit	☰	46					
1.0	ORGANIC							1.0
	SILTY GRAVELLY SAND							
2.0	SILT							2.0
	GRAVELLY SAND							
3.0	SILT -brown -moist							3.0
	END HOLE at 3.7							
4.0								4.0
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: DT	COMPLETION DEPTH: 3.7 m
	REVIEWED BY:	COMPLETE: 88/10/21
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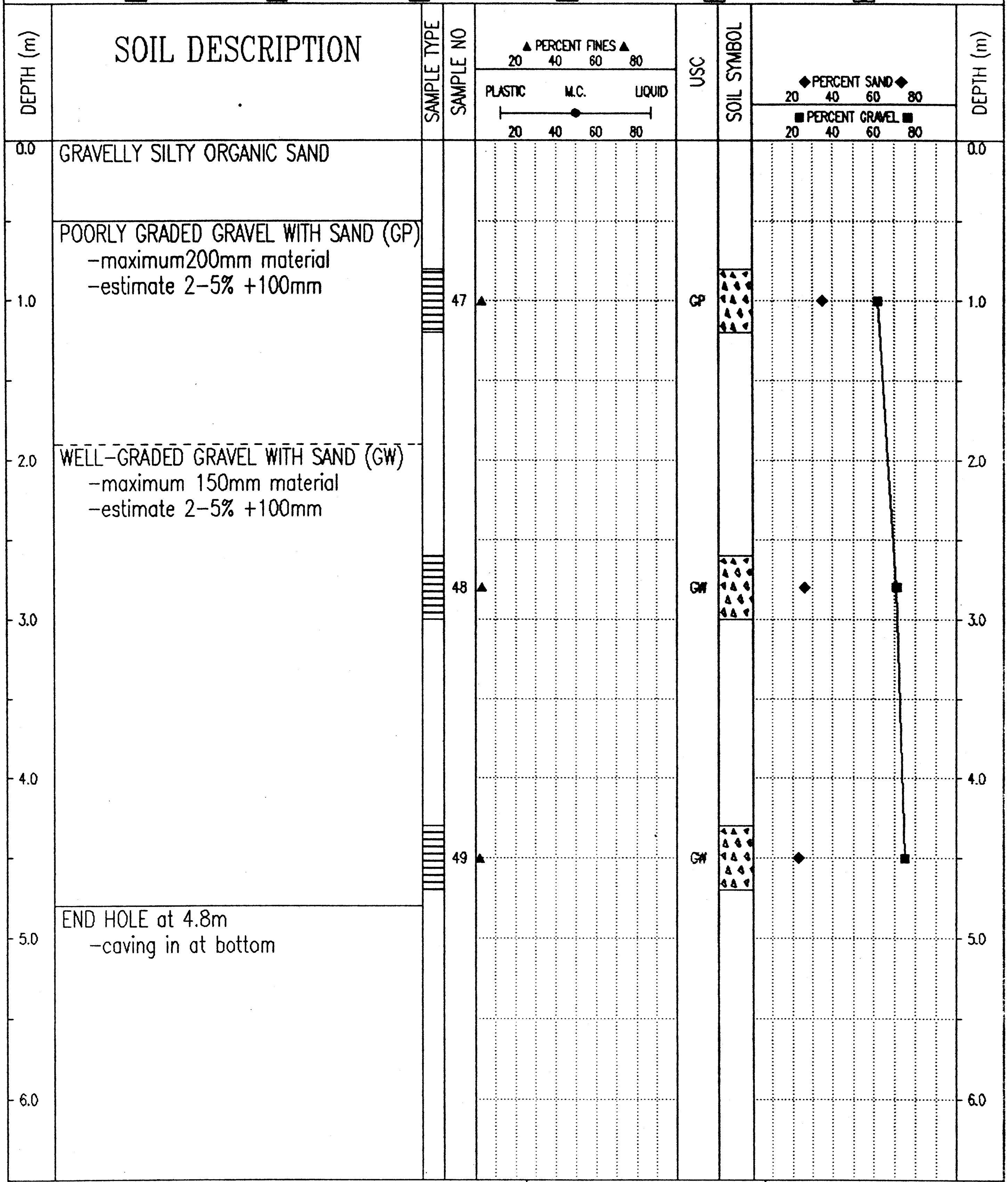
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 030-22
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



SOIL DESCRIPTION

GRAVELLY SILTY ORGANIC SAND

POORLY GRADED GRAVEL WITH SAND (GP)
-maximum200mm material
-estimate 2-5% +100mm

WELL-GRADED GRAVEL WITH SAND (GW)
-maximum 150mm material
-estimate 2-5% +100mm

END HOLE at 4.8m
-caving in at bottom

Government of Yukon Transportation Engineering	LOGGED BY: DT	COMPLETION DEPTH: 4.8 m
	REVIEWED BY:	COMPLETE: 88/10/21
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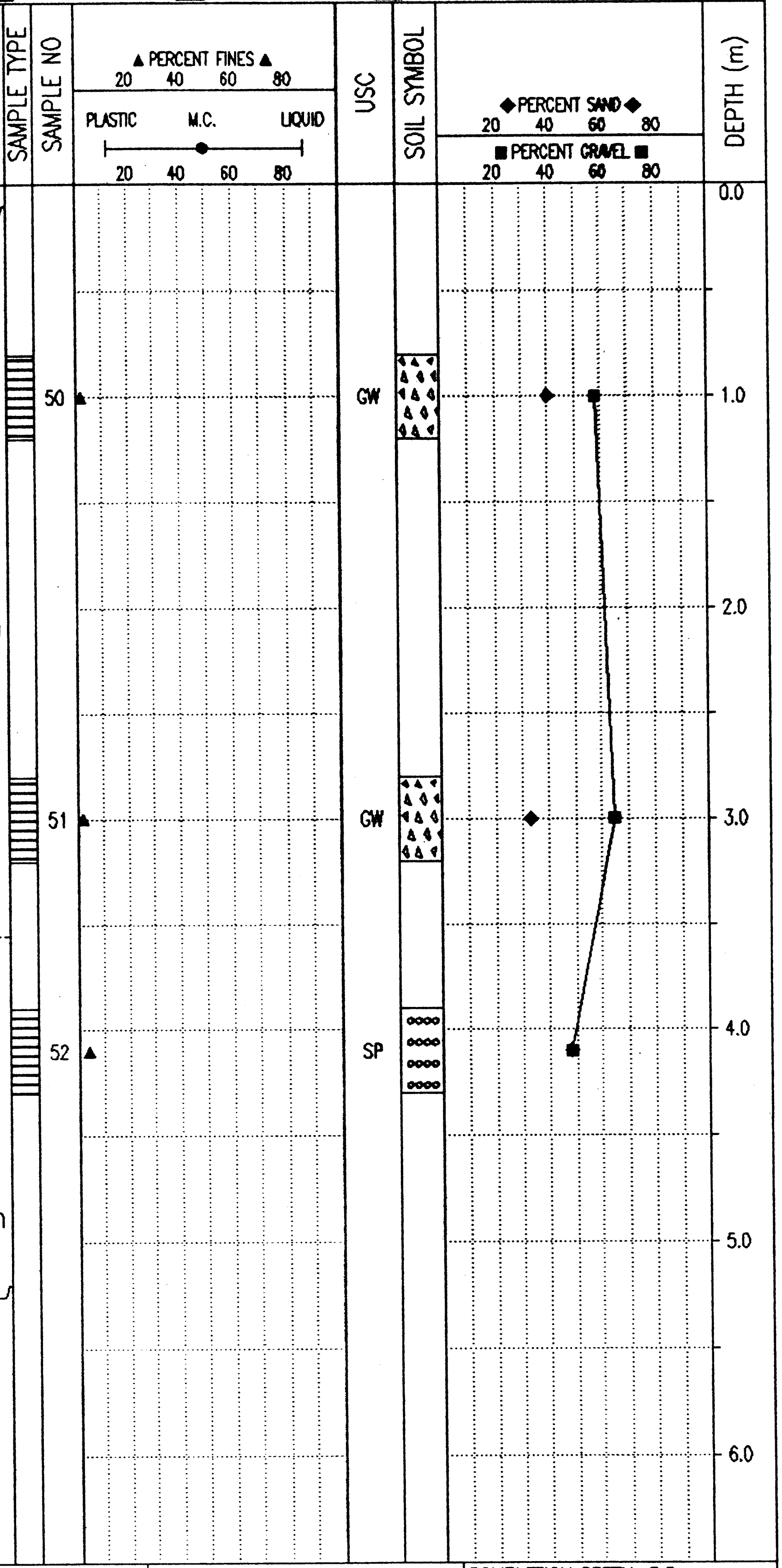
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 030-23
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▥ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	ORGANIC MATERIAL
	WELL-GRADED GRAVEL WITH SAND (GW) -gray brown -moist -maximum 100mm material -easy digging
2.0	-maximum 125mm material below 2.0m -estimate 5% +100mm -subrounded to rounded material -easy digging
	POORLY GRADED SAND WITH GRAVEL (SP) -gray brown -moist
	-vertical hole walls, little sluffing
5.0	-maximum 200mm material below 4.8m -estimate 5% +100mm below 4.8m -organic material present below 4.8m
	END HOLE at 5.2m -photo #1-1 -flat logged area -spruce to 250mm dia.

SAMPLE NO	USC
50	GW
51	GW
52	SP



Government of Yukon Transportation Engineering	LOGGED BY: CB	COMPLETION DEPTH: 5.2 m
	REVIEWED BY:	COMPLETE: 88/10/22
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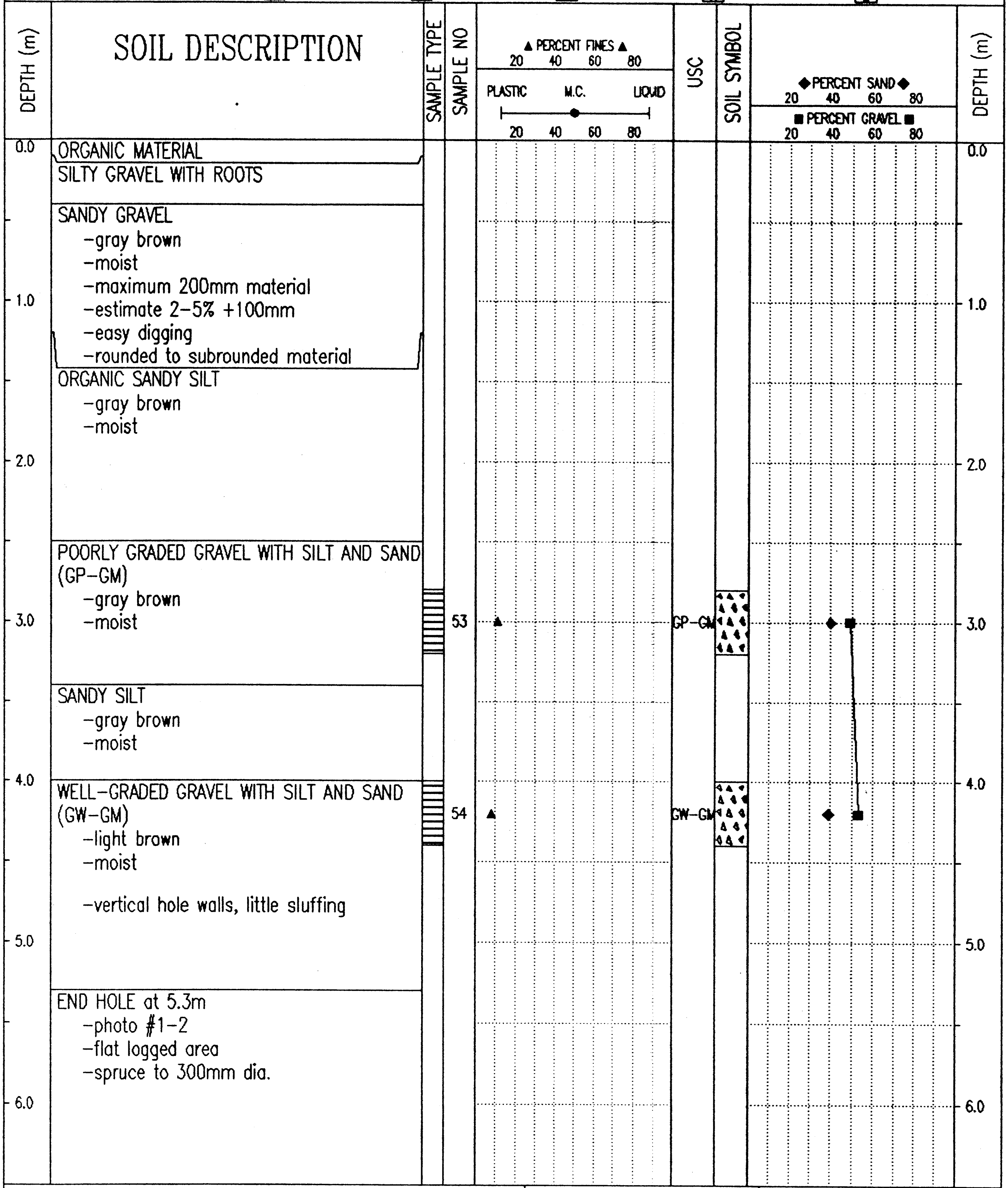
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 030-24
PWC CAPITAL – Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SOIL DESCRIPTION

ORGANIC MATERIAL

SILTY GRAVEL WITH ROOTS

SANDY GRAVEL
- gray brown
- moist
- maximum 200mm material
- estimate 2-5% +100mm
- easy digging
- rounded to subrounded material

ORGANIC SANDY SILT
- gray brown
- moist

POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM)
- gray brown
- moist

SANDY SILT
- gray brown
- moist

WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM)
- light brown
- moist

- vertical hole walls, little sluffing

END HOLE at 5.3m
- photo #1-2
- flat logged area
- spruce to 300mm dia.

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	REVIEWED BY:	COMPLETE: 88/10/22
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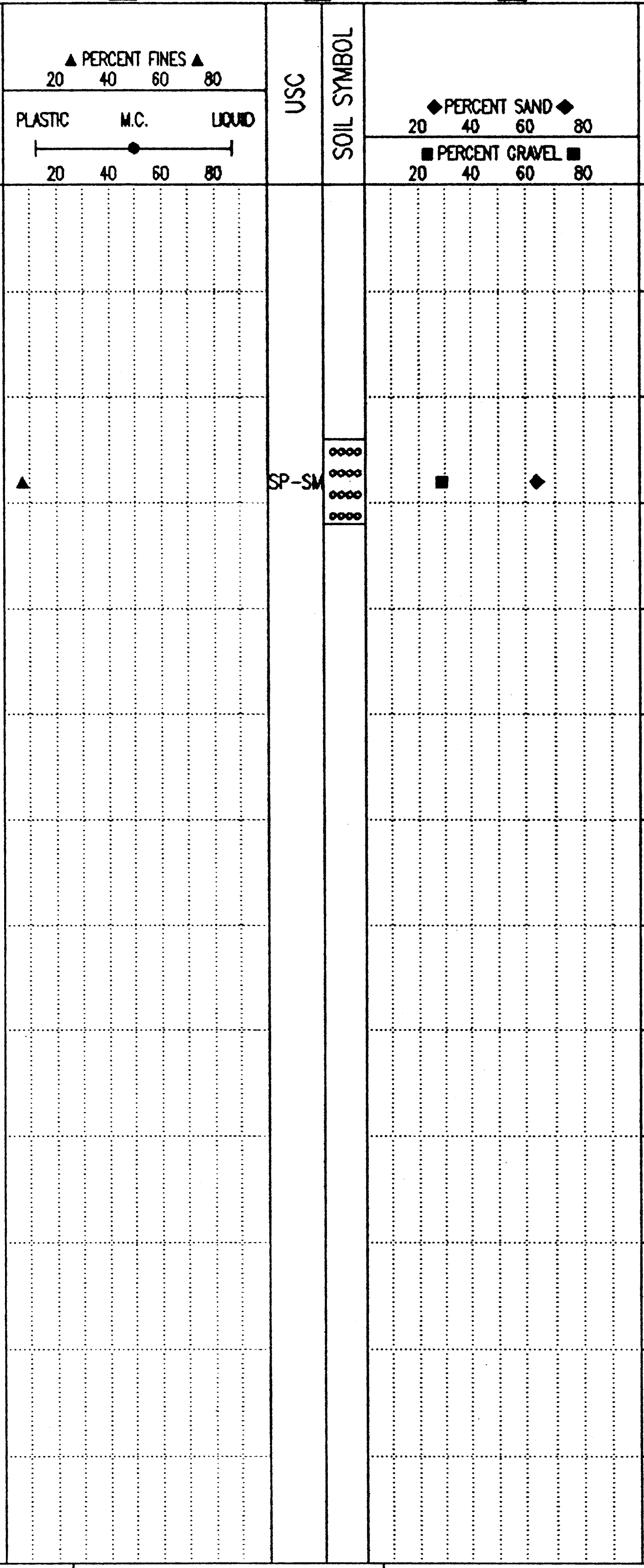
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 030-25
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC MATERIAL			
	SILTY SANDY GRAVEL -gray brown -moist -maximum 100mm material -round to subrounded material			
1.0	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM) -gray brown -moist -roots to 2.0m	☰	55	SP-SM
2.0				
	SILTY SAND -brown -moist			
3.0				
4.0	-no sluffing			
5.0				
	END HOLE at 5.3m -spruce to 400mm dia., 9m tall			
6.0				



Government of Yukon Transportation Engineering	LOGGED BY: CB	COMPLETION DEPTH: 5.3 m
	REVIEWED BY:	COMPLETE: 88/10/22
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 030-26
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ◧ CORE

DEPTH (m)

SOIL DESCRIPTION

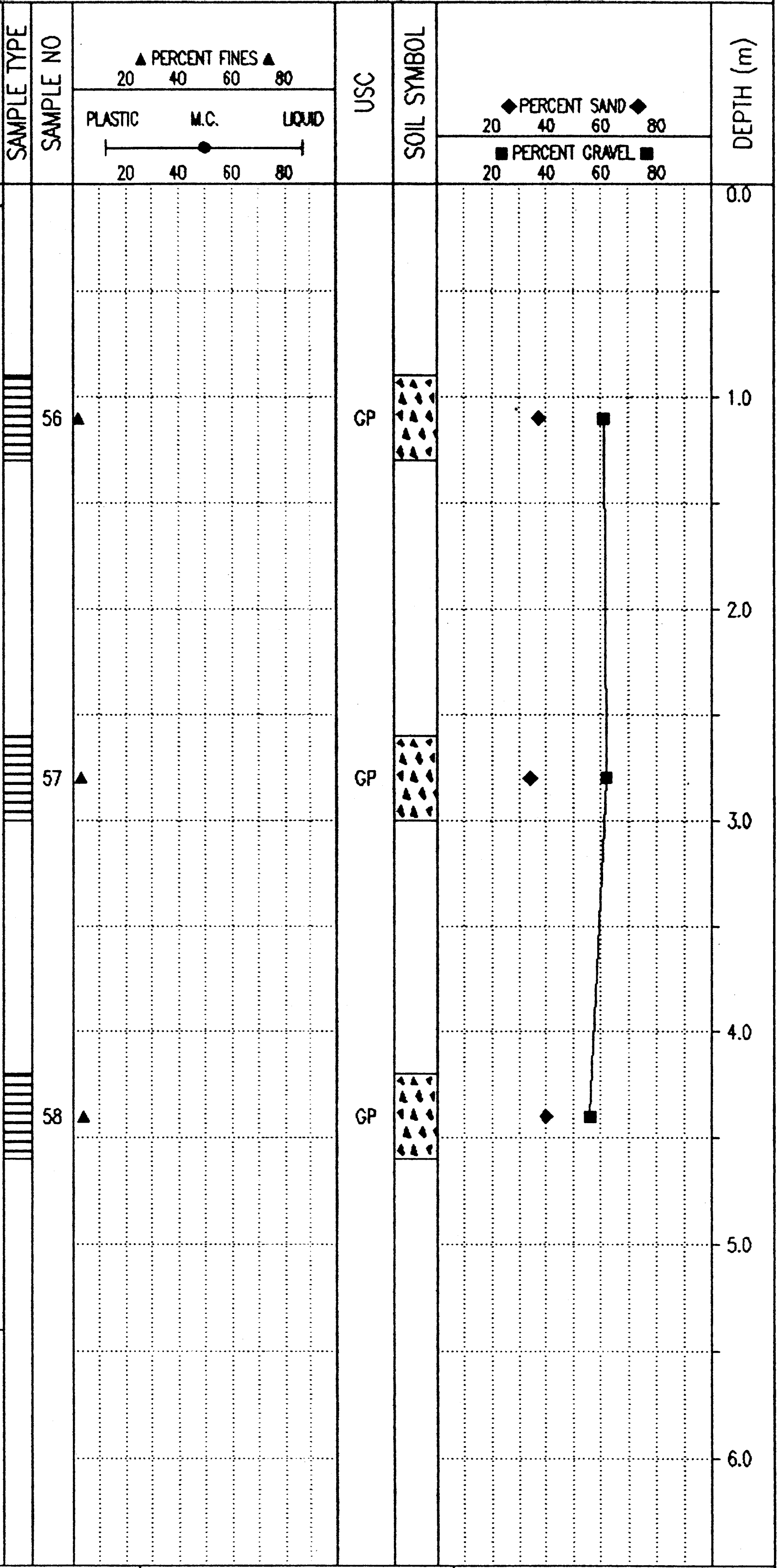
0.0 ORGANIC MATERIAL

POORLY GRADED GRAVEL WITH SAND (GP)
- gray brown
- moist
- maximum 150mm material
- estimate 5% +100mm
- rounded to subrounded material

2.0
- maximum200mm material below 2.0m
- estimate 5% +100mm
- rounded to subrounded material
- easy digging

3.0
- odd stick throughout

END HOLE at 5.4m
- photo #1-3



Government of Yukon Transportation Engineering	LOGGED BY: CB
	REVIEWED BY:
	Fig. No:
COMPLETION DEPTH: 5.4 m	
COMPLETE: 88/10/22	
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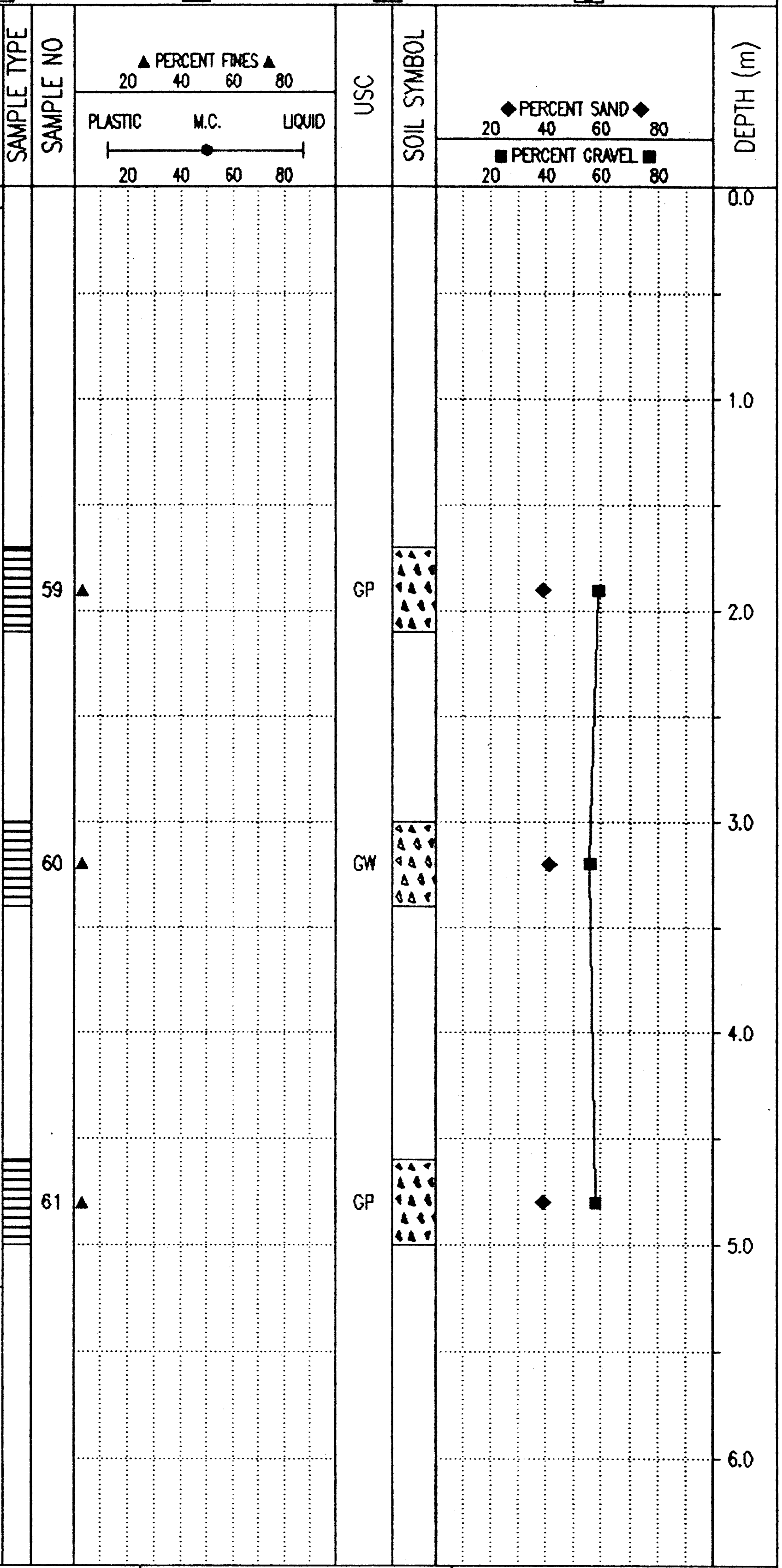
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 030-27
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ◨ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	ORGANIC MATERIAL
	WELL TO POORLY GRADED GRAVEL WITH SAND (GW TO GP) -gray brown -damp to moist -maximum 250mm material -estimate 5% +100mm -root system to 1.0m
1.0	
2.0	
3.0	-verticle hole walls, little sluffing
4.0	
5.0	
	END HOLE at 5.2m -photo #1-4
6.0	



LOGGED BY: CB	COMPLETION DEPTH: 5.2 m
REVIEWED BY:	COMPLETE: 88/10/22
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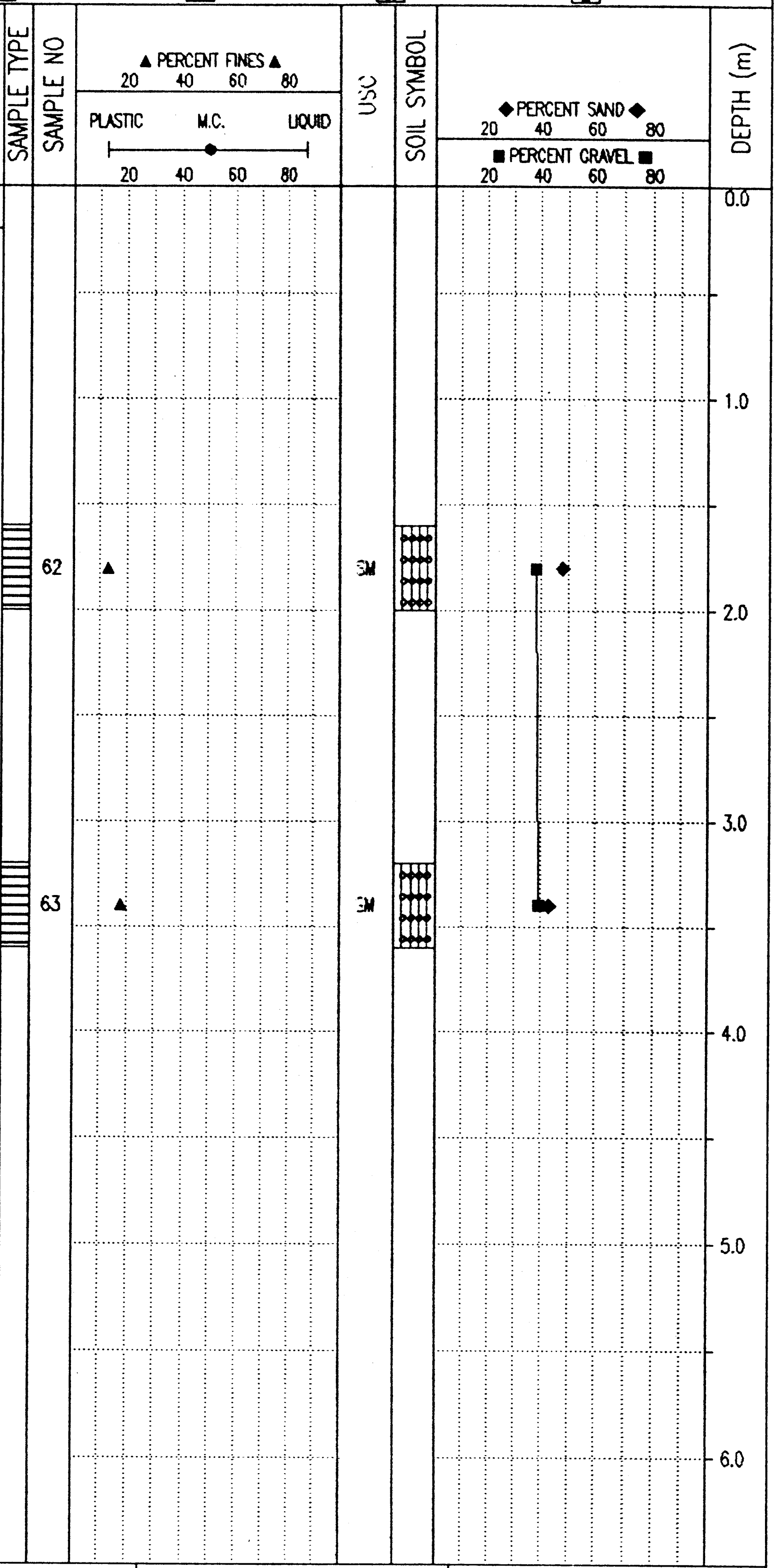
02/03/22 11:36AM

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 030-28
PWC CAPITAL – Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ◫ CORE

SOIL DESCRIPTION

DEPTH (m)	SOIL DESCRIPTION
0.0	ORGANIC MATERIAL
	SILTY SAND WITH GRAVEL (SM) –gray brown –damp –silt pockets –maximum 300mm material –estimate 5–10% +100mm –rounded to subrounded material –silty sand seams below 1.2m
2.0	–light brown below 2.0m –moist below 2.0m
3.0	–gravel seams alternating with silty sand seams below 3.0m
5.0	END HOLE at 5.0m –photo #1–5 shot down hole
6.0	



Government of Yukon
Transportation Engineering

LOGGED BY: CB	COMPLETION DEPTH: 5.0 m
REVIEWED BY:	COMPLETE: 88/10/22
Fig. No:	Page 1 of 1

02/03/22 11:36AM

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 030-29
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE

DEPTH (m)

SOIL DESCRIPTION

0.0

ORGANIC MATERIAL

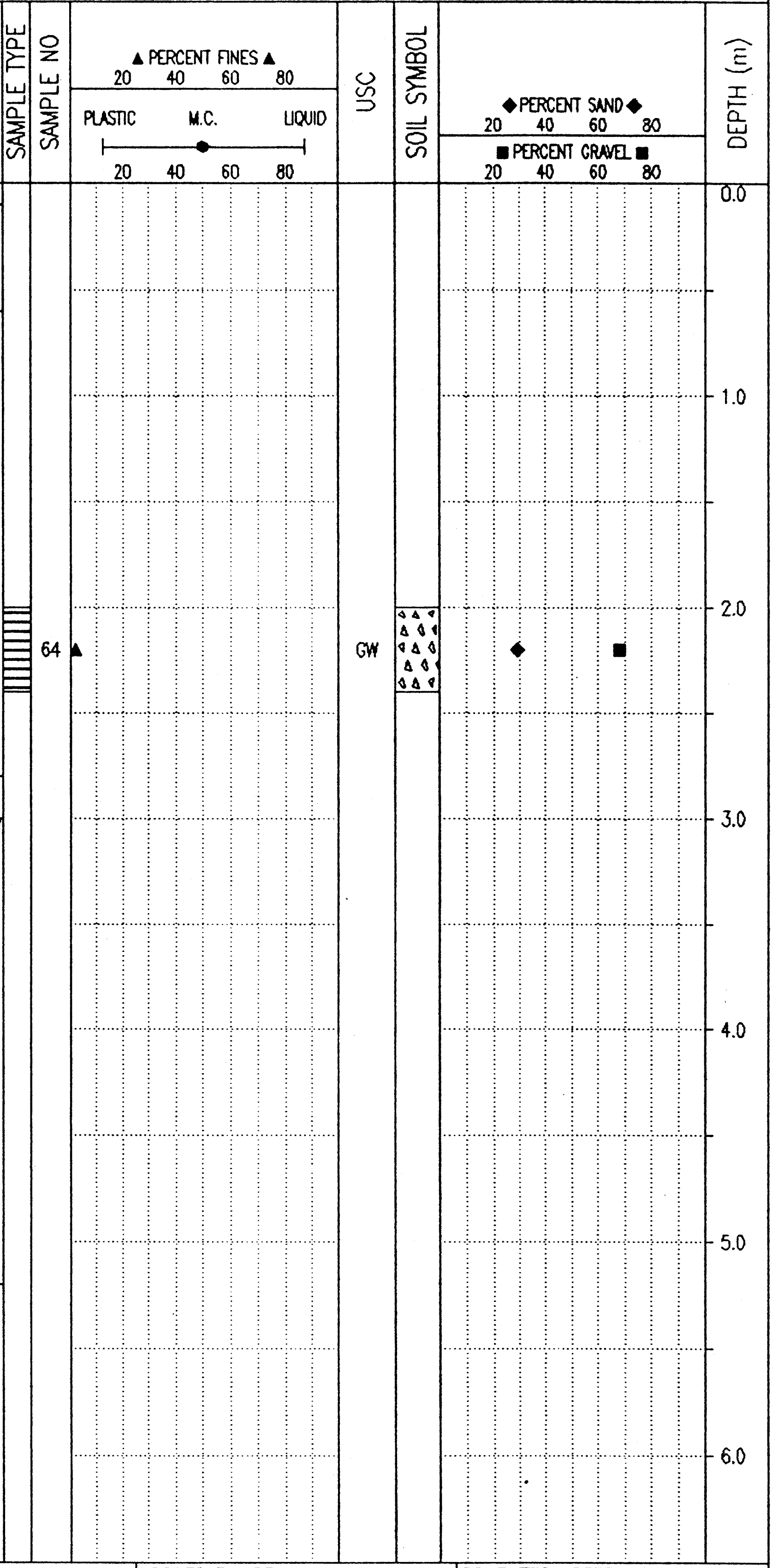
GRAVELLY SILTY SAND
- root system

WELL-GRADED GRAVEL WITH SAND (GW)
- gray brown
- damp
- maximum 300mm material
- estimate 10% +100mm

ORGANIC MATERIAL
- small logs and branches

SANDY SILT
- brown
- moist
- trace of gravel

END HOLE at 5.2m
- spruce to 6.0m, willows
- flat



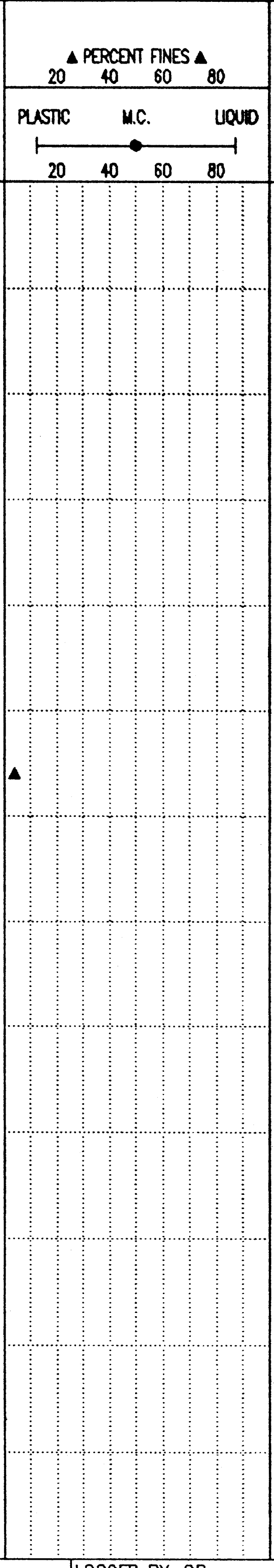
Government of Yukon Transportation Engineering	LOGGED BY: CB	COMPLETION DEPTH: 5.2 m
	REVIEWED BY:	COMPLETE: 88/10/22
	Fig. No:	Page 1 of 1

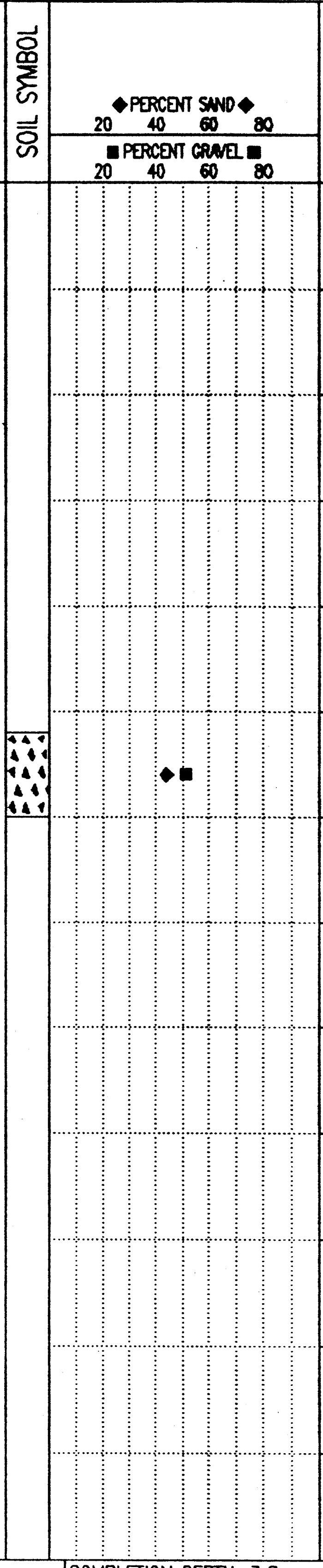
02/03/22 11:36AM

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 030-30
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC MATERIAL			
	FINE GRAVEL			
	SANDY SILT			
1.0	FINE GRAVEL			
	SANDY SILT			
2.0	POORLY GRADED GRAVEL WITH SAND (GP) -gray brown -moist -maximum 100mm material	☰	65	GP
3.0	SANDY SILT -brown -moist			
	END HOLE at 3.6m -flat terrain			
4.0				
5.0				
6.0				





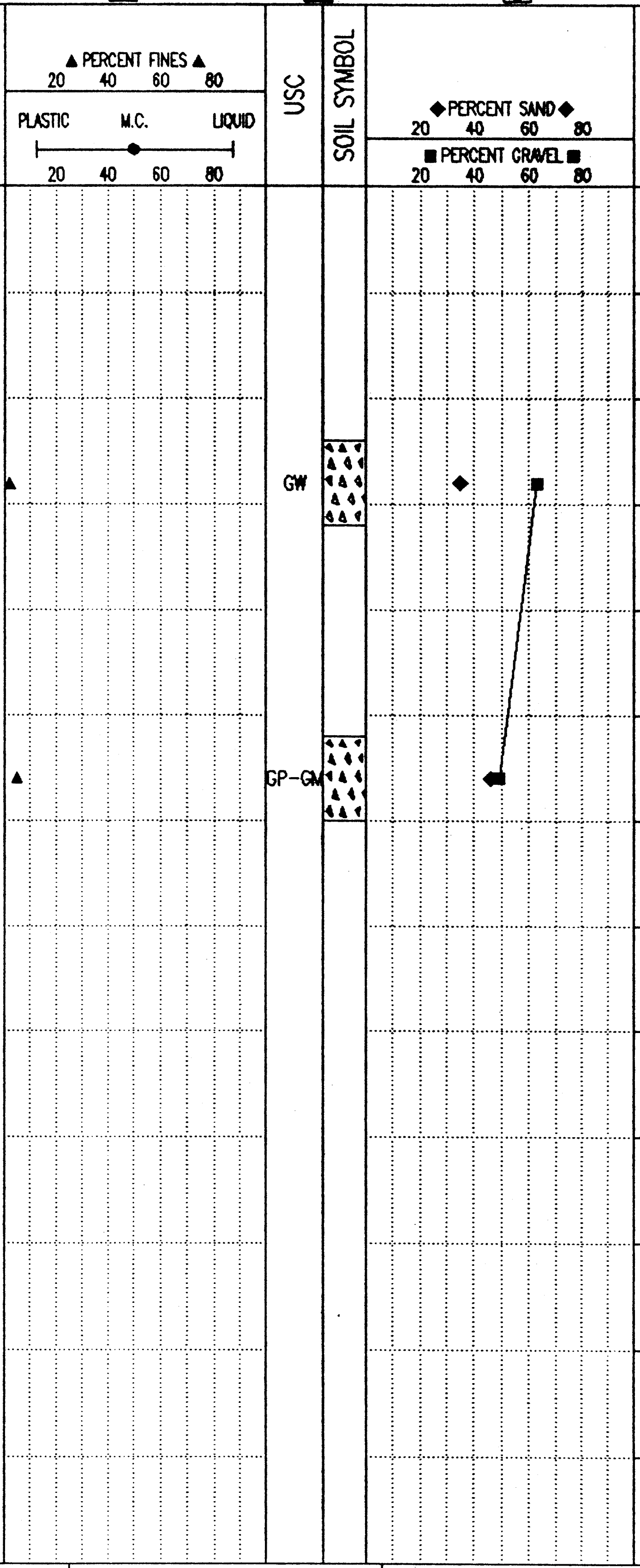
Government of Yukon Transportation Engineering	LOGGED BY: CB	COMPLETION DEPTH: 3.6 m
	REVIEWED BY:	COMPLETE: 88/10/22
	Fig. No:	Page 1 of 1

02/03/22 11:22AM

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 030-31
PWC CAPITAL – Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC MATERIAL			
	WELL-GRADED GRAVEL WITH SAND (GW) –gray brown –damp –maximum 300mm material –estimate 5% +100mm			
1.0		☰	66	GW
2.0	POORLY GRADED GRAVEL WITH SILT AND SAND (GP–GM) –gray brown –moist –maximum 300mm material –estimate 5% +100mm	☰	67	GP–GM
3.0				
4.0				
	END HOLE at 4.6m –flat terrain			
5.0				
6.0				



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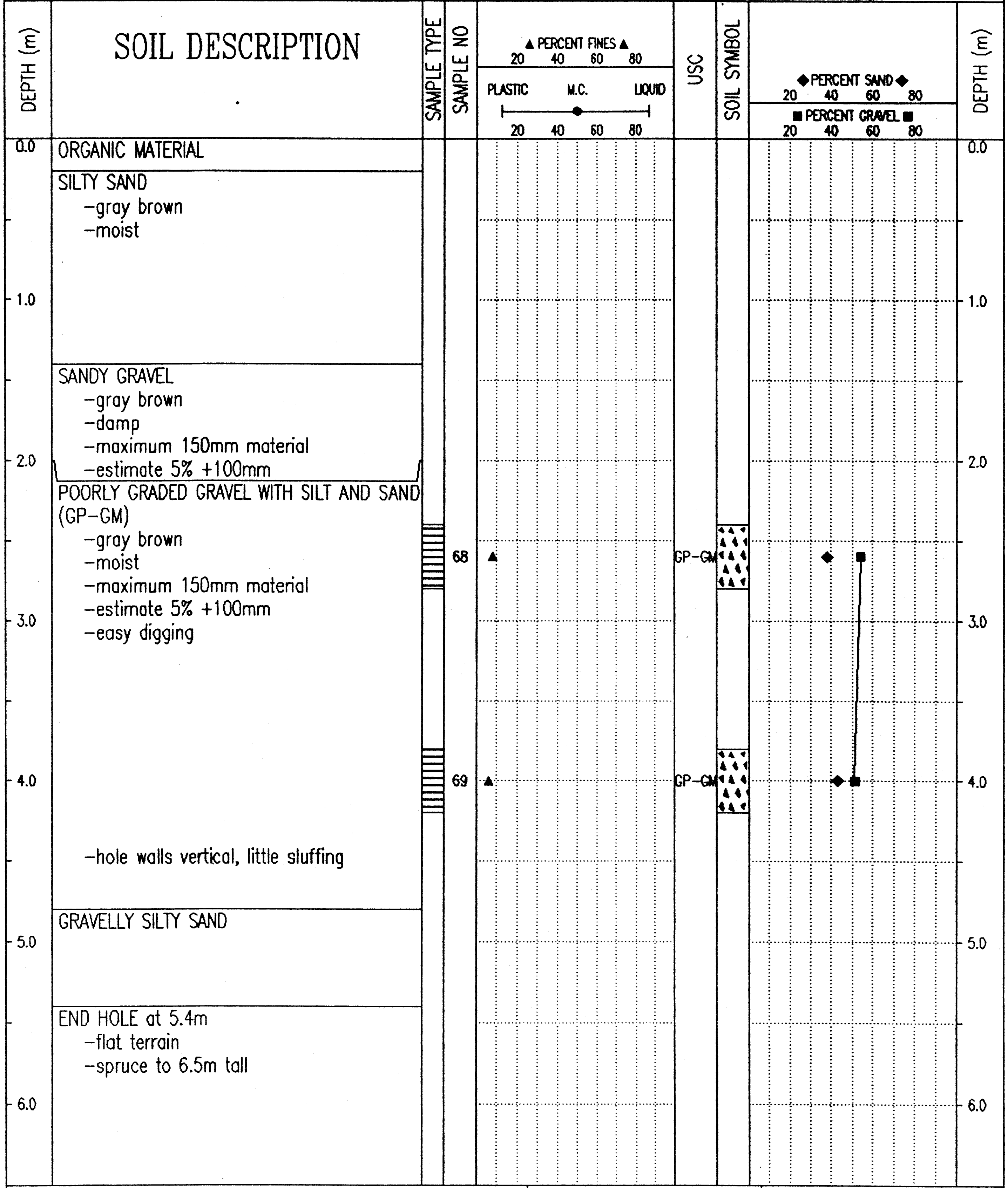
Transportation Engineering

LOGGED BY: CB	COMPLETION DEPTH: 4.6 m
REVIEWED BY:	COMPLETE: 88/10/22
Fig. No:	Page 1 of 1

02/03/22 11:22AM

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 030-32
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



SOIL DESCRIPTION

ORGANIC MATERIAL

SILTY SAND
- gray brown
- moist

SANDY GRAVEL
- gray brown
- damp
- maximum 150mm material
- estimate 5% +100mm

POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM)
- gray brown
- moist
- maximum 150mm material
- estimate 5% +100mm
- easy digging
- hole walls vertical, little sluffing

GRAVELLY SILTY SAND

END HOLE at 5.4m
- flat terrain
- spruce to 6.5m tall

SAMPLE NO	USC
68	GP-GM
69	GP-GM

Government of Yukon Transportation Engineering	
LOGGED BY: CB	COMPLETION DEPTH: 5.4 m
REVIEWED BY:	COMPLETE: 88/10/23
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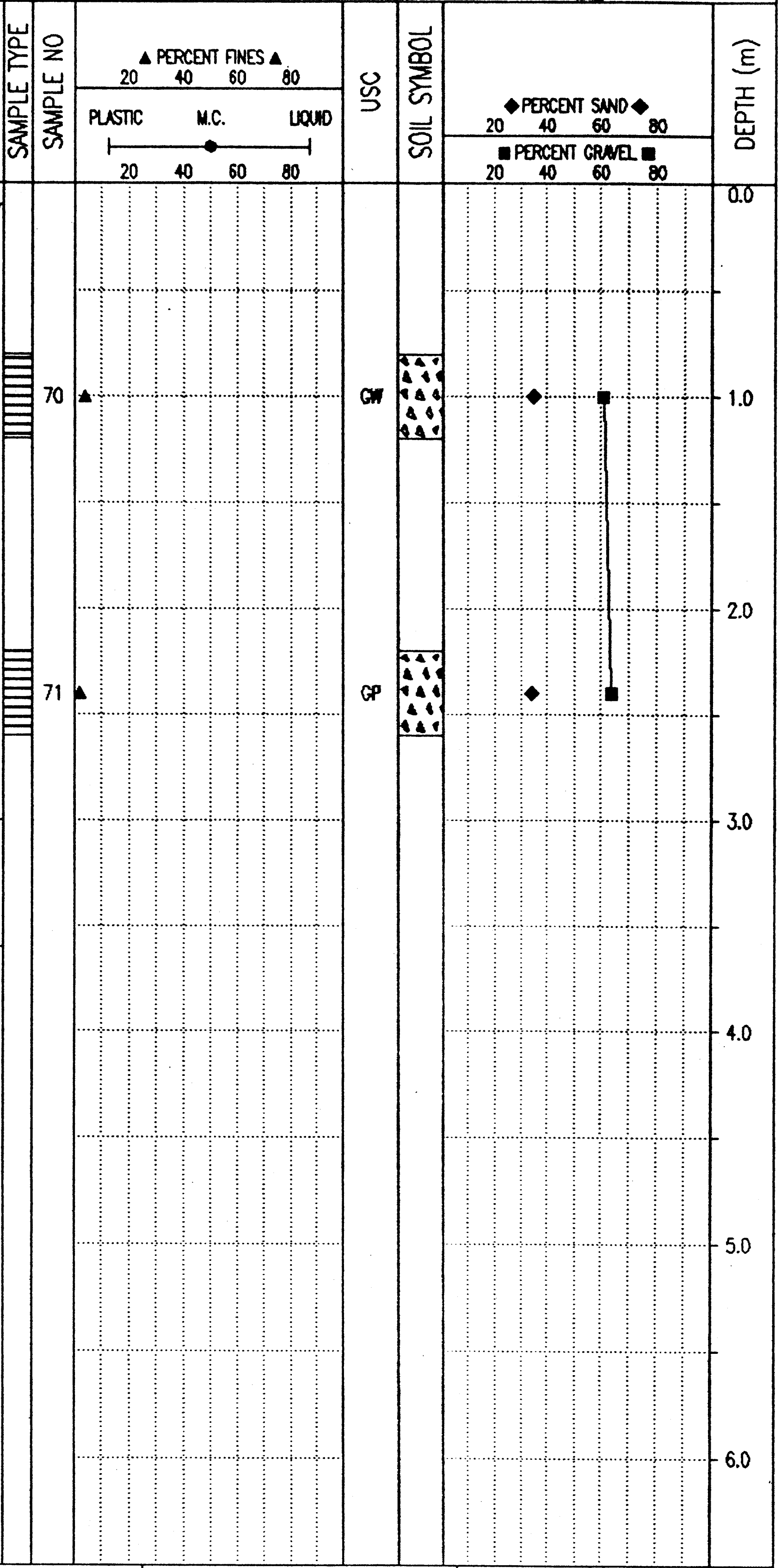
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 030-33
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ◫ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	ORGANIC MATERIAL
	WELL TO POORLY GRADED GRAVEL WITH SAND (GW TO GP) –gray brown –moist –maximum 250mm material –estimate 5% +100mm
1.0	
2.0	–free standing walls
3.0	ORGANIC SANDY SILT –hard
	END HOLE at 3.6m –flat terrain –spruce to 10m tall
4.0	
5.0	
6.0	



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Transportation Engineering

LOGGED BY: CB	COMPLETION DEPTH: 3.6 m
REVIEWED BY:	COMPLETE: 88/10/23
Fig. No:	Page 1 of 1

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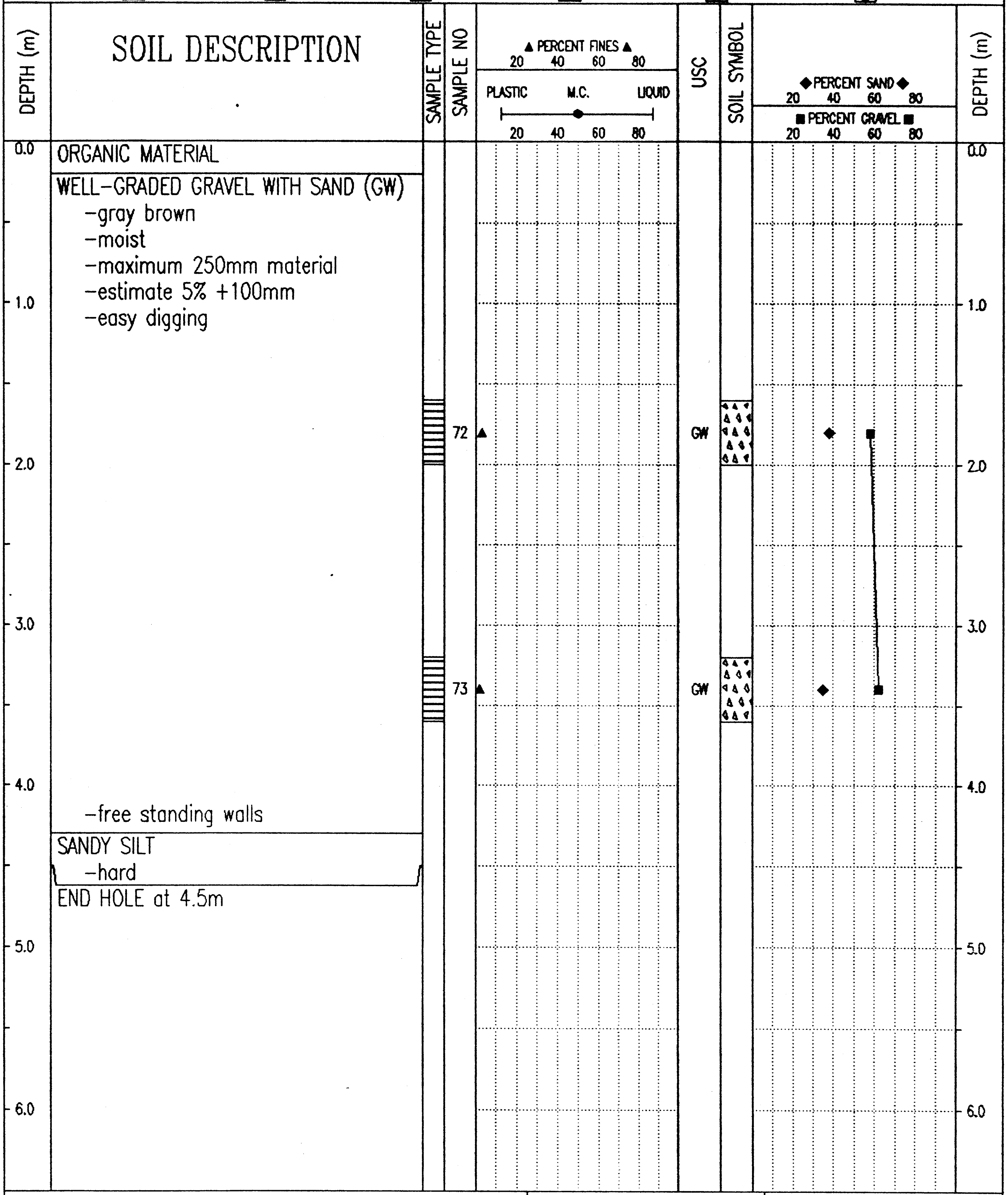
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 030-34
PWC CAPITAL – Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



ORGANIC MATERIAL

WELL-GRADED GRAVEL WITH SAND (GW)
- gray brown
- moist
- maximum 250mm material
- estimate 5% +100mm
- easy digging
- free standing walls

SANDY SILT
- hard

END HOLE at 4.5m

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Transportation Engineering

LOGGED BY: CB	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 88/10/23
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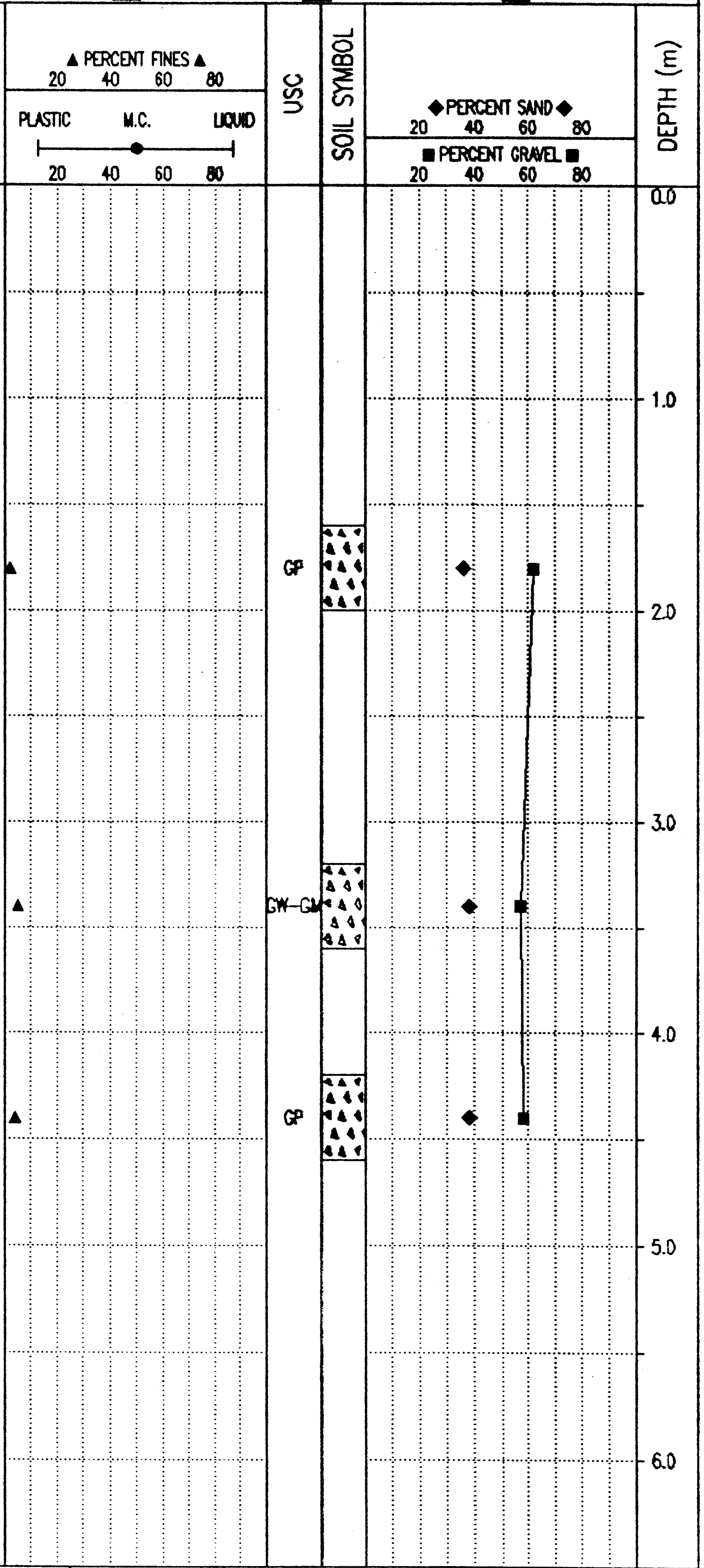
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 030-35
PWC CAPITAL – Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▯ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	ORGANIC MATERIAL			
	POORLY GRADED GRAVEL WITH SAND (GP) –gray brown –moist –maximum 250mm material estimate 5% +100mm			
1.8		☰	74	GP
3.0	–maximum 300mm material below 3.0m –estimate 5–10% +100mm below 3.0m –occasional decomposed log below 3.0m –free standing walls			
3.4		☰	75	GW–GM
4.4		☰	76	GP
5.2	END HOLE at 5.2m –photo #1–6 –flat terrain			



Government of Yukon Transportation Engineering	LOGGED BY: CB	COMPLETION DEPTH: 5.2 m
	REVIEWED BY:	COMPLETE: 88/10/23
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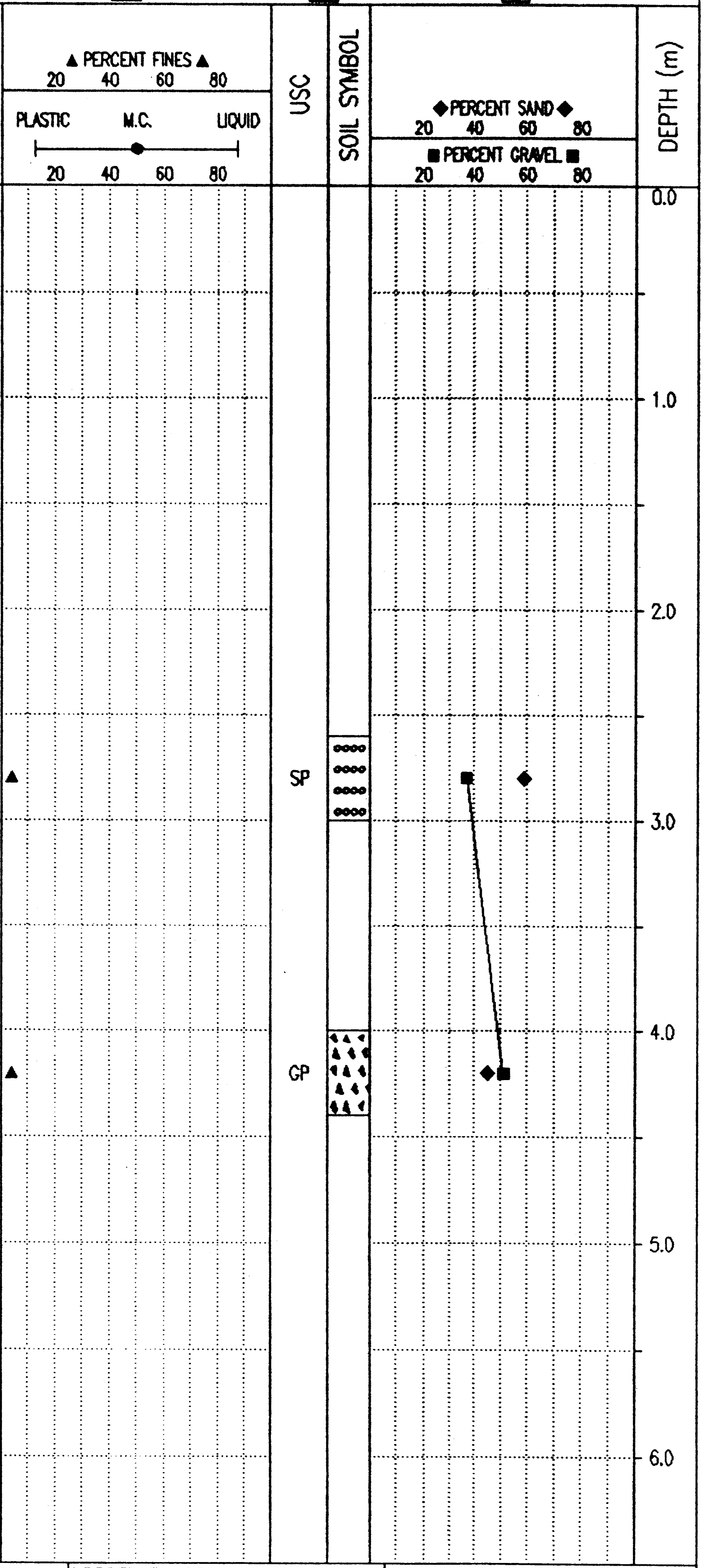
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 030-36
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▯ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲	USC	SOIL SYMBOL
0.0	ORGANIC MATERIAL					
	SANDY SILTY GRAVEL -gray brown -moist -maximum 300mm material -estimate 5% +100mm					
1.0	GRAVELLY SILT					
	FINE GRAVEL					
	GRAVELLY SANDY SILT					
2.0	POORLY GRADED SAND WITH GRAVEL (SP) -gray brown -moist -maximum 200mm material -estimate 5% +100mm	☰	77	▲	SP	oooo
	POORLY GRADED GRAVEL WITH SAND (GP) -gray brown -moist -maximum 200mm material -estimate 5% +100mm -easy digging -very little sluffing	☰	78	▲	GP	▲▲
5.0	GRAVELLY SANDY SILT -hard digging					
	END HOLE at 5.2m -flat terrain					
6.0						



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LOGGED BY: CB	COMPLETION DEPTH: 5.2 m
REVIEWED BY:	COMPLETE: 88/10/23
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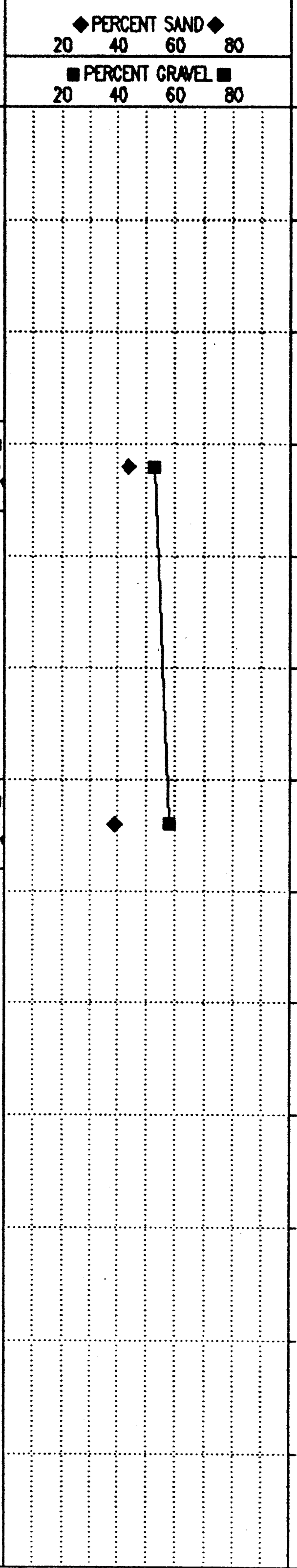
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 030-37
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲	USC	SOIL SYMBOL
0.0	ORGANIC MATERIAL					
	POORLY GRADED GRAVEL WITH SAND (GP) -gray brown -moist -maximum 300mm material -estimate 10% +100mm					
1.6		☰	79	▲	GP	
3.2		☰	80	▲	GP	
3.8	ALTERNATING LAYERS OF SILT, SAND, ORGANICS -hard digging					
4.6	END HOLE at 4.6m					



LOGGED BY: CB	COMPLETION DEPTH: 4.6 m
REVIEWED BY:	COMPLETE: 88/10/23
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Transportation Engineering

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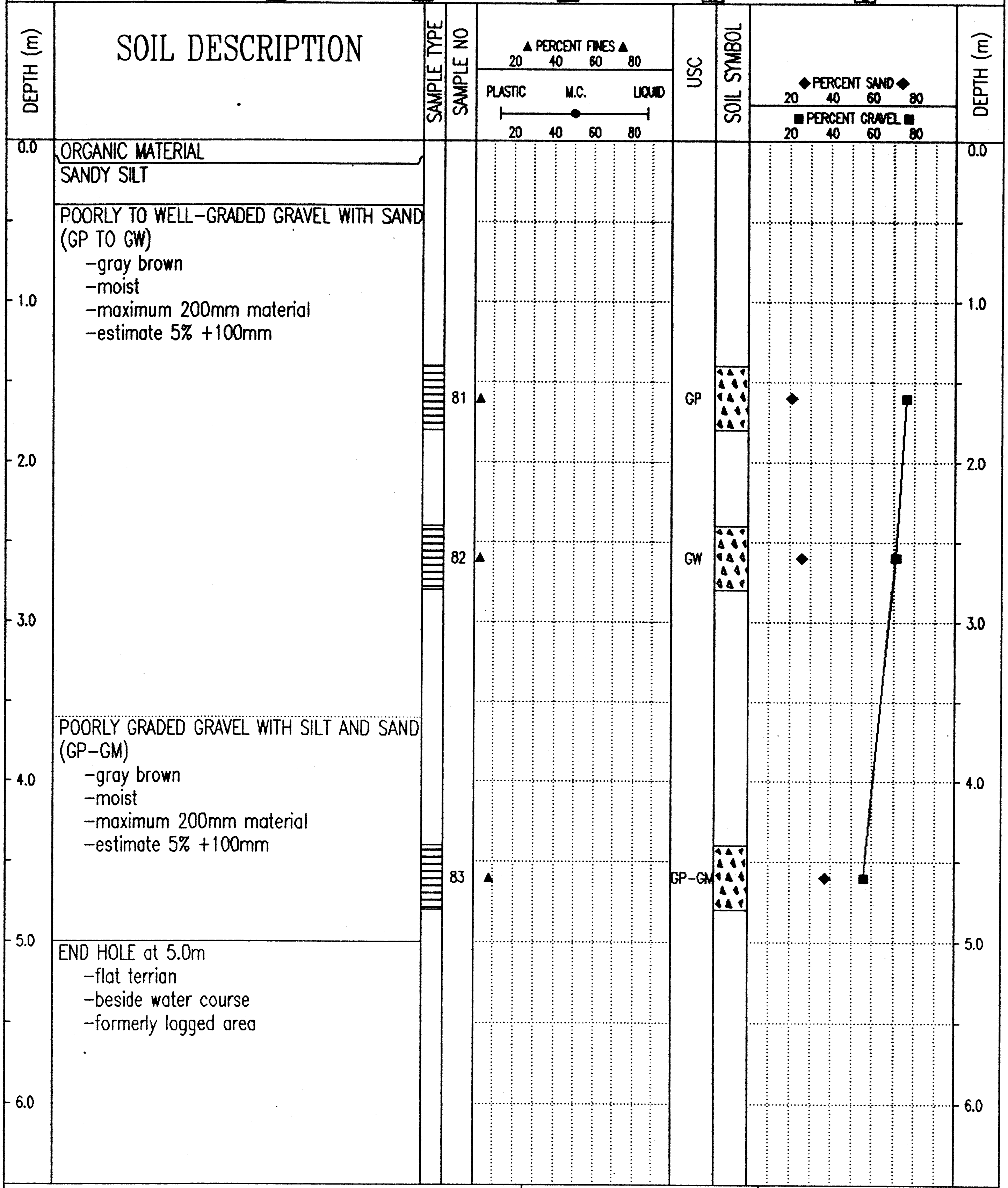
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 030-38
PWC CAPITAL – Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ◧ CORE



ORGANIC MATERIAL

SANDY SILT

POORLY TO WELL-GRADED GRAVEL WITH SAND (GP TO GW)
- gray brown
- moist
- maximum 200mm material
- estimate 5% +100mm

POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM)
- gray brown
- moist
- maximum 200mm material
- estimate 5% +100mm

END HOLE at 5.0m
- flat terrian
- beside water course
- formerly logged area

Government of Yukon Transportation Engineering	LOGGED BY: CB	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 88/10/23
	Fig. No:	Page 1 of 1

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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 030-39
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE

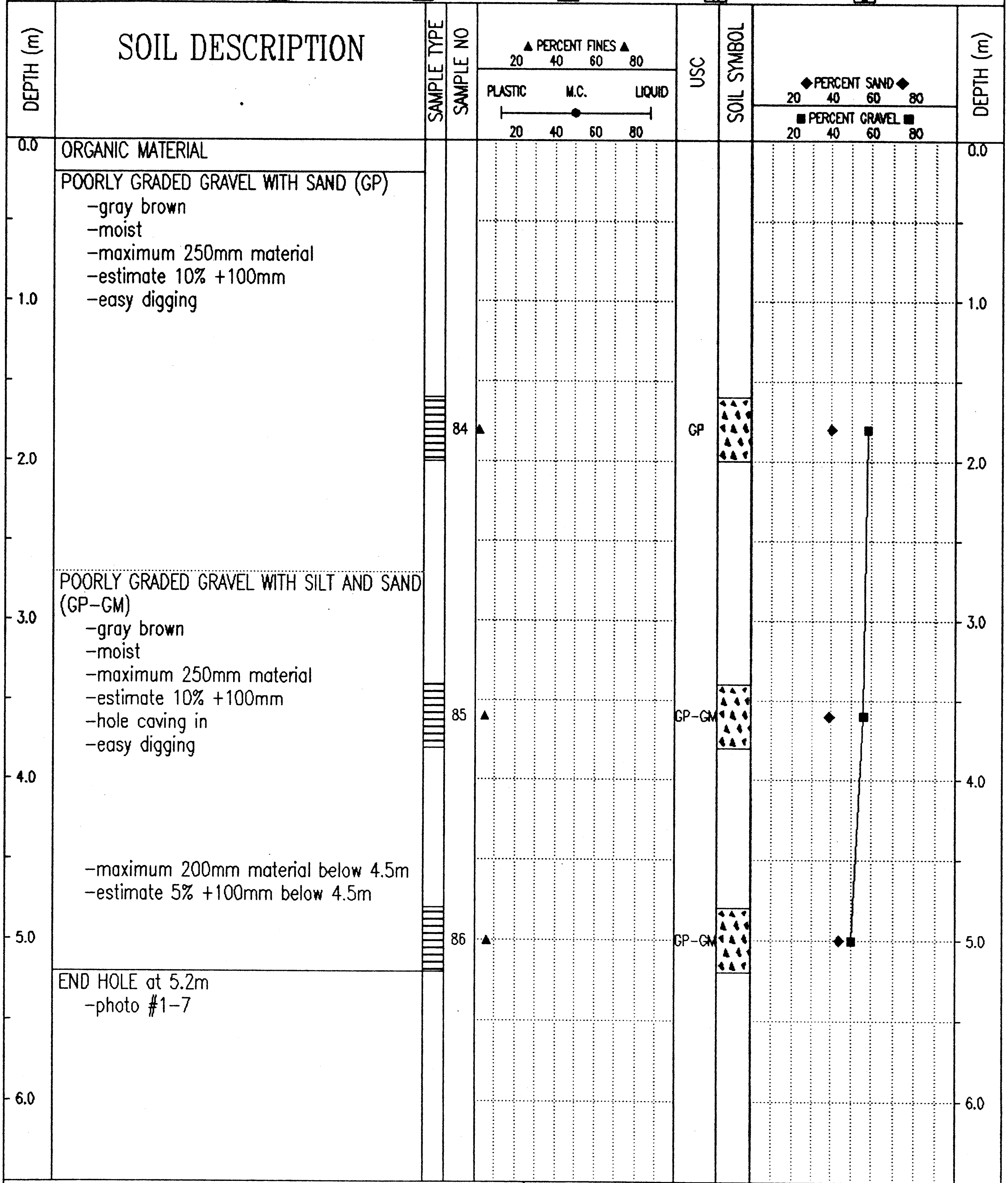
SOIL DESCRIPTION

0.0 ORGANIC MATERIAL

POORLY GRADED GRAVEL WITH SAND (GP)
- gray brown
- moist
- maximum 250mm material
- estimate 10% +100mm
- easy digging

POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM)
- gray brown
- moist
- maximum 250mm material
- estimate 10% +100mm
- hole caving in
- easy digging
- maximum 200mm material below 4.5m
- estimate 5% +100mm below 4.5m

END HOLE at 5.2m
- photo #1-7



Government of Yukon Transportation Engineering	LOGGED BY: CB	COMPLETION DEPTH: 5.2 m
	REVIEWED BY:	COMPLETE: 88/10/23
	Fig. No:	Page 1 of 1

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Pit 115 G-04
Km 1750 LHS Alaska Highway

1988
Pit Run Sample Results

PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-01
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.19

FIELD NO: 1
LAB NO: 2853
DEPTH: 1.1-1.5
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	100
76.2	75
50.8	69
38.1	65
25.4	57
19.0	53
12.7	45
9.5	41
4.76	34
2.38	--
2.00	27
1.19	--
0.841	20
0.595	--
0.42	14
0.297	--
0.177	--
0.149	7
0.074	4

M.C.(%): --

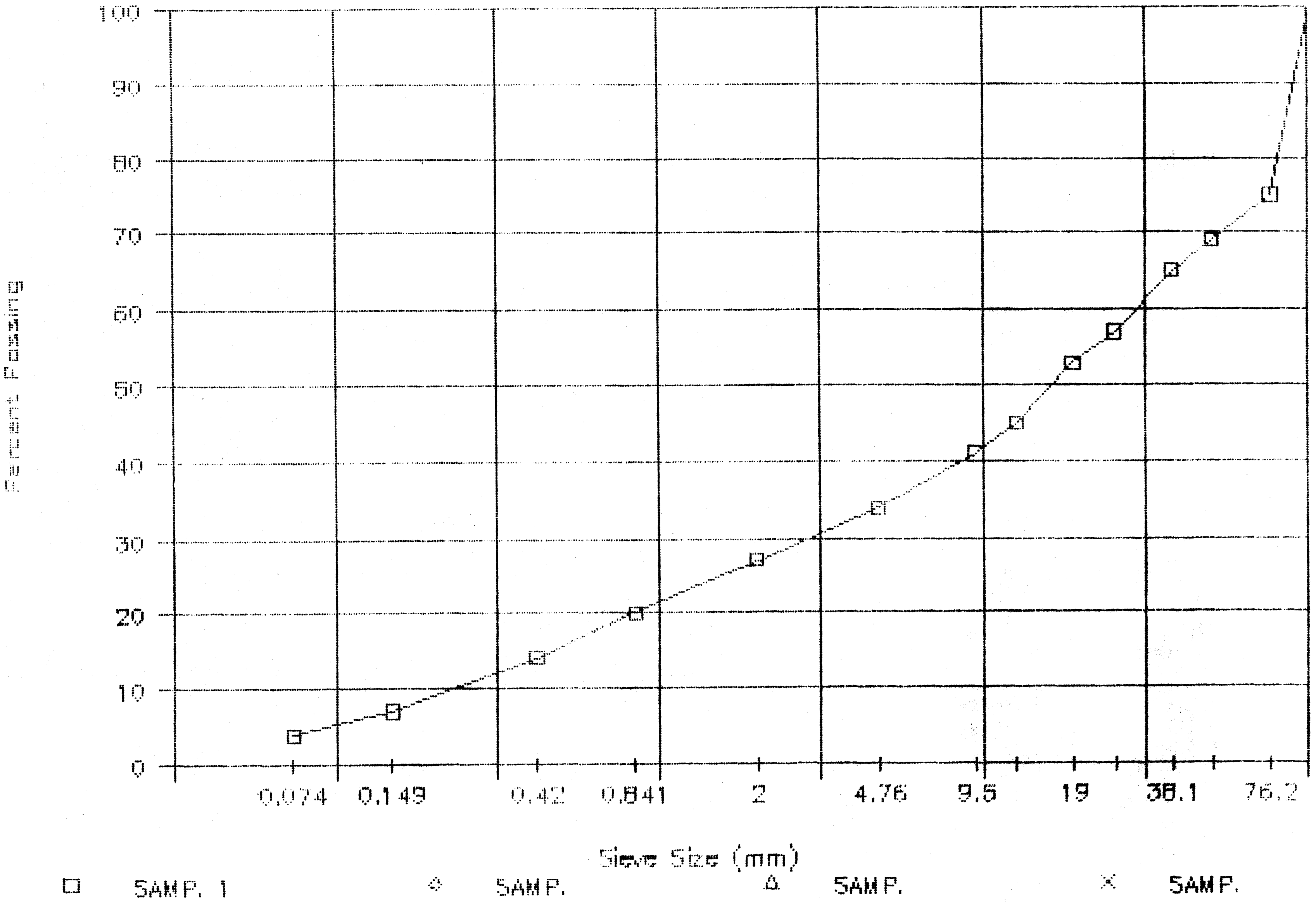
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 66
% SAND: 31
% FINES: 4

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029—01



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-02
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.19

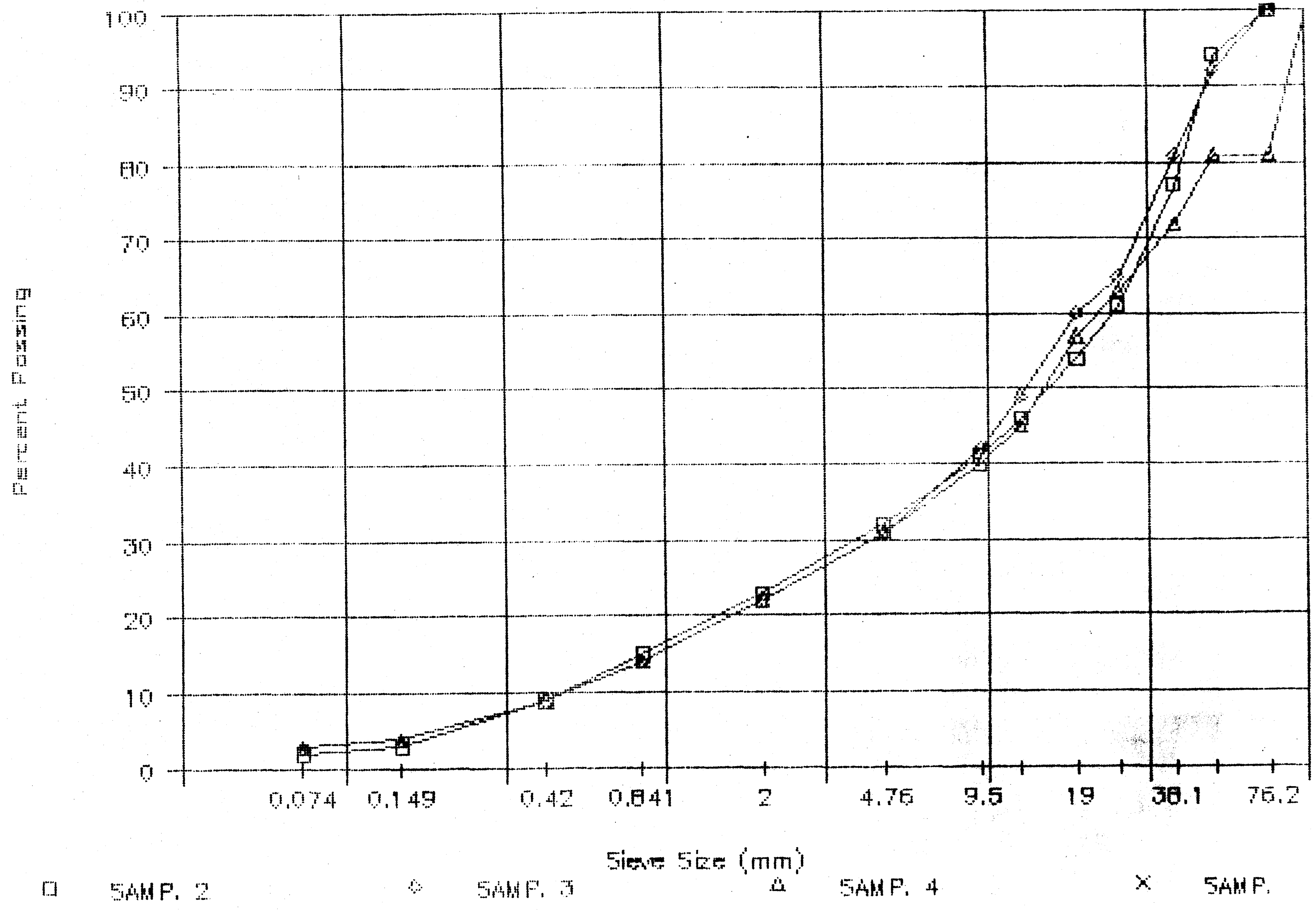
FIELD NO:	2	FIELD NO:	3	FIELD NO:	4
LAB NO:	2854	LAB NO:	2855	LAB NO:	2856
DEPTH:	1.2-1.9	DEPTH:	3.0-3.4	DEPTH:	5.0-5.3
TYPE:	BULK	TYPE:	BULK	TYPE:	BULK

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	--	101.6	100
76.2	100	76.2	100	76.2	91
50.8	94	50.8	92	50.8	81
38.1	77	38.1	81	38.1	72
25.4	61	25.4	65	25.4	63
19.0	54	19.0	60	19.0	57
12.7	46	12.7	49	12.7	45
9.5	41	9.5	42	9.5	40
4.76	32	4.76	31	4.76	31
2.38	--	2.38	--	2.38	--
2.00	23	2.00	22	2.00	22
1.19	--	1.19	--	1.19	--
0.841	15	0.841	14	0.841	14
0.595	--	0.595	--	0.595	--
0.42	9	0.42	9	0.42	9
0.297	--	0.297	--	0.297	--
0.177	--	0.177	--	0.177	--
0.149	3	0.149	4	0.149	4
0.074	2	0.074	3	0.074	3

M.C.(%):	--	M.C.(%):	--	M.C.(%):	--
LIMITS		LIMITS		LIMITS	
LIQUID:	--	LIQUID:	--	LIQUID:	--
PLASTIC:	--	PLASTIC:	--	PLASTIC:	--
P.I.:	N.P.	P.I.:	N.P.	P.I.:	N.P.
% GRAVEL:	68	% GRAVEL:	69	% GRAVEL:	69
% SAND:	30	% SAND:	29	% SAND:	28
% FINES:	2	% FINES:	3	% FINES:	3
CLASSIFICATION: WELL-GRADED GRAVEL WITH SAND (GW)		CLASSIFICATION: WELL-GRADED GRAVEL WITH SAND (GW)		CLASSIFICATION: WELL-GRADED GRAVEL WITH SAND (GW)	

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-02



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-03
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.19

FIELD NO: 5
LAB NO: 2857
DEPTH: 1.2-1.6
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	87
38.1	79
25.4	68
19.0	59
12.7	49
9.5	44
4.76	35
2.38	--
2.00	25
1.19	--
0.841	14
0.595	--
0.42	8
0.297	--
0.177	--
0.149	3
0.074	2

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 65
% SAND: 33
% FINES: 2

CLASSIFICATION:
POORLY GRADED
GRAVEL WITH SAND
(GP)

FIELD NO: 6
LAB NO: 2858
DEPTH: 2.8-3.3
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	71
38.1	68
25.4	58
19.0	54
12.7	47
9.5	42
4.76	33
2.38	--
2.00	23
1.19	--
0.841	14
0.595	--
0.42	9
0.297	--
0.177	--
0.149	4
0.074	3

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 67
% SAND: 30
% FINES: 3

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

FIELD NO: 7
LAB NO: 2859
DEPTH: 4.3-4.7
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	100
76.2	72
50.8	62
38.1	60
25.4	53
19.0	50
12.7	41
9.5	37
4.76	29
2.38	--
2.00	20
1.19	--
0.841	13
0.595	--
0.42	8
0.297	--
0.177	--
0.149	4
0.074	3

M.C.(%): --

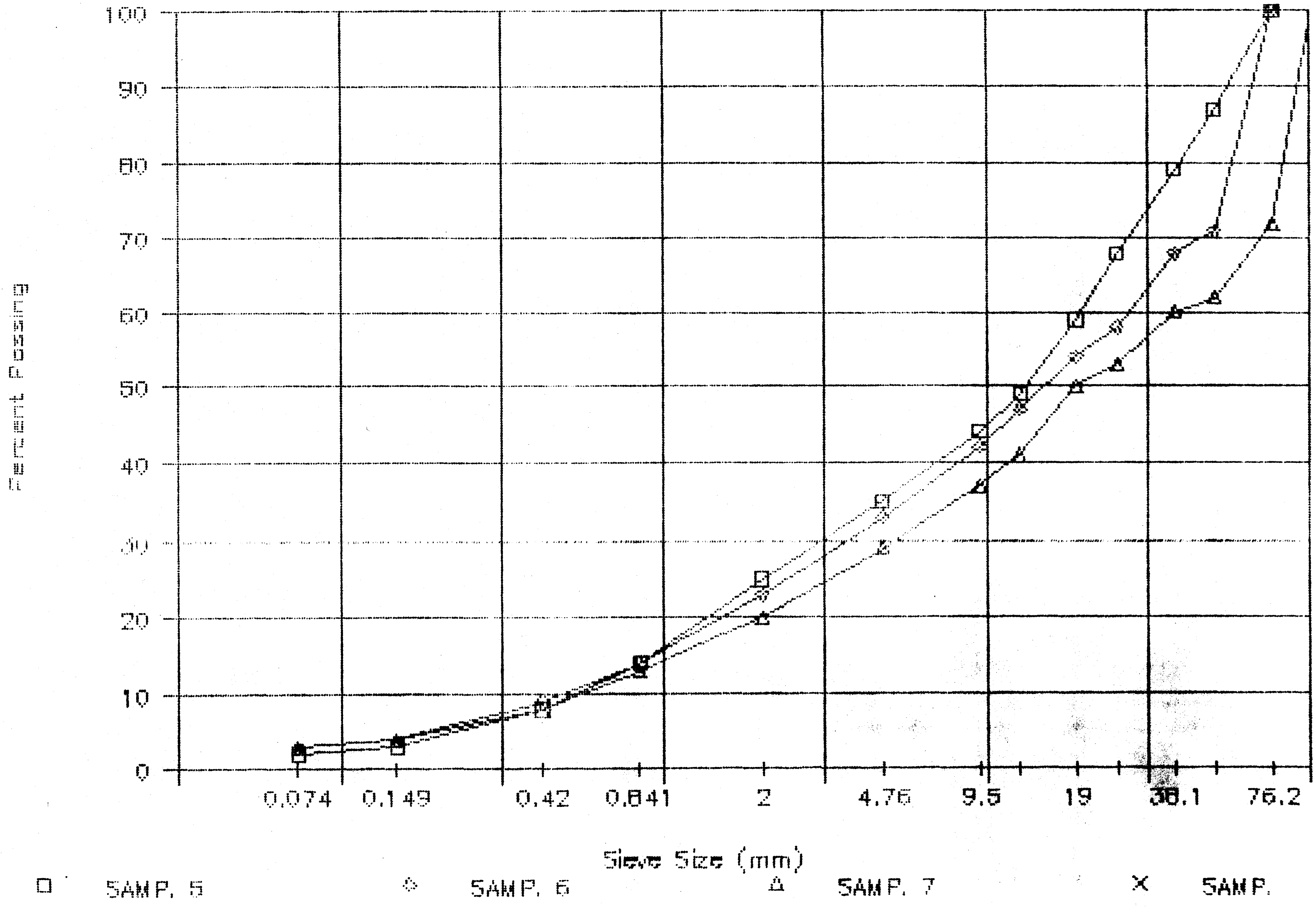
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 71
% SAND: 26
% FINES: 3

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-03



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-04
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.19

FIELD NO: 8
LAB NO: 2860
DEPTH: 1.3-1.7
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	100
76.2	82
50.8	82
38.1	71
25.4	60
19.0	51
12.7	43
9.5	38
4.76	29
2.38	--
2.00	20
1.19	--
0.841	13
0.595	--
0.42	7
0.297	--
0.177	--
0.149	3
0.074	2

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 71
% SAND: 27
% FINES: 2

CLASSIFICATION:
WELL-GRADED GRAVEL WITH SAND (GW)

FIELD NO: 9
LAB NO: 2861
DEPTH: 3.3-3.6
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	81
38.1	69
25.4	52
19.0	49
12.7	42
9.5	38
4.76	30
2.38	--
2.00	20
1.19	--
0.841	12
0.595	--
0.42	7
0.297	--
0.177	--
0.149	3
0.074	2

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 70
% SAND: 27
% FINES: 2

CLASSIFICATION:
WELL-GRADED GRAVEL WITH SAND (GW)

FIELD NO: 10
LAB NO: 2862
DEPTH: 5.2-5.5
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	75
38.1	70
25.4	62
19.0	55
12.7	45
9.5	38
4.76	29
2.38	--
2.00	19
1.19	--
0.841	12
0.595	--
0.42	8
0.297	--
0.177	--
0.149	4
0.074	3

M.C.(%): --

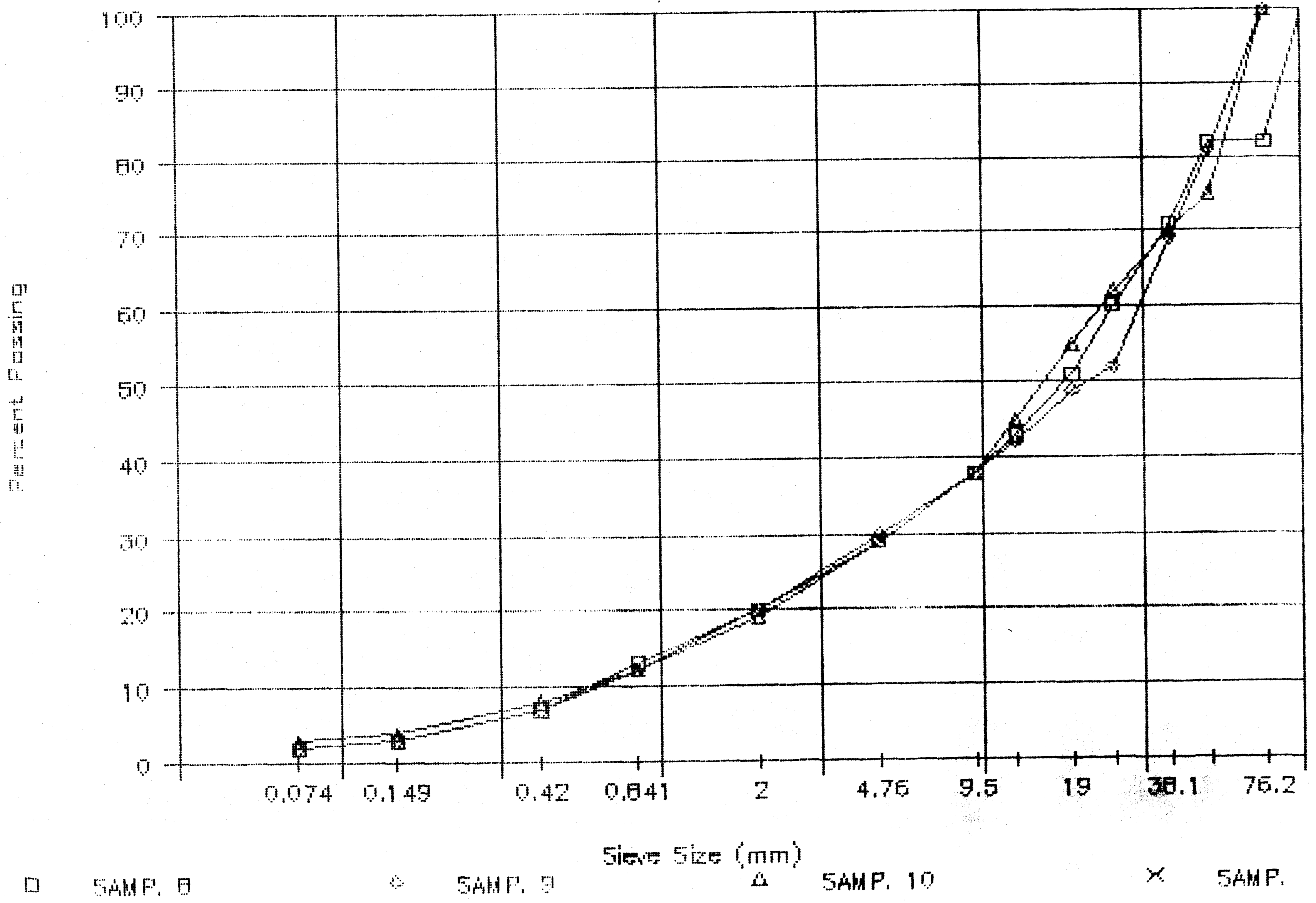
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 71
% SAND: 26
% FINES: 3

CLASSIFICATION:
WELL-GRADED GRAVEL WITH SAND (GW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-04



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-05
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.19

FIELD NO: 11
LAB NO: 2863
DEPTH: 1.5-2.0
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	82
38.1	77
25.4	66
19.0	59
12.7	48
9.5	43
4.76	33
2.38	--
2.00	24
1.19	--
0.841	15
0.595	--
0.42	9
0.297	--
0.177	--
0.149	4
0.074	2

M.C.(%): --

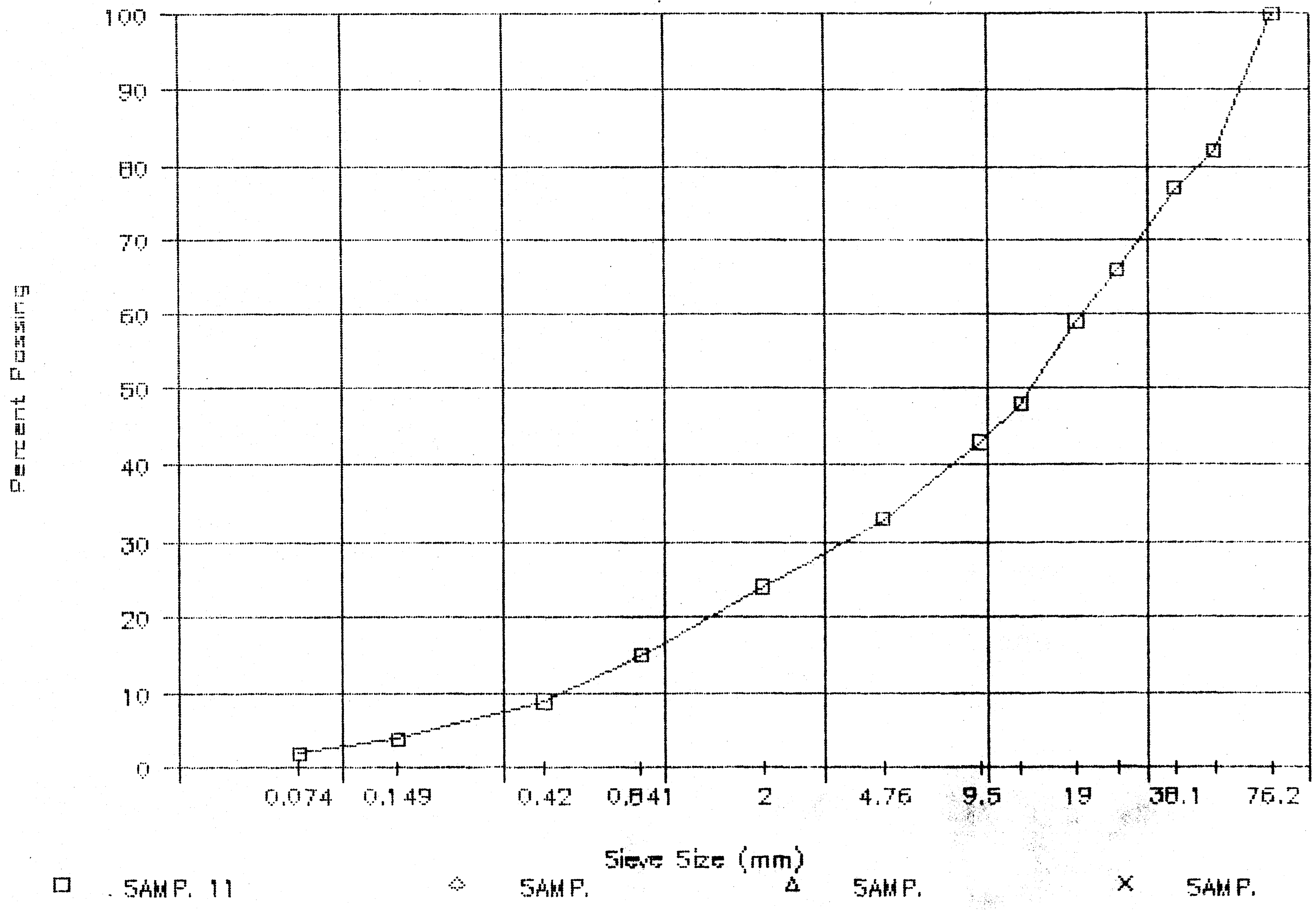
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 67
% SAND: 31
% FINES: 2

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-05



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-06
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.19

FIELD NO: 12
LAB NO: 2864
DEPTH: 1.5-1.9
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	89
38.1	77
25.4	66
19.0	60
12.7	50
9.5	45
4.76	34
2.38	--
2.00	23
1.19	--
0.841	14
0.595	--
0.42	7
0.297	--
0.177	--
0.149	3
0.074	2

M.C.(%): --

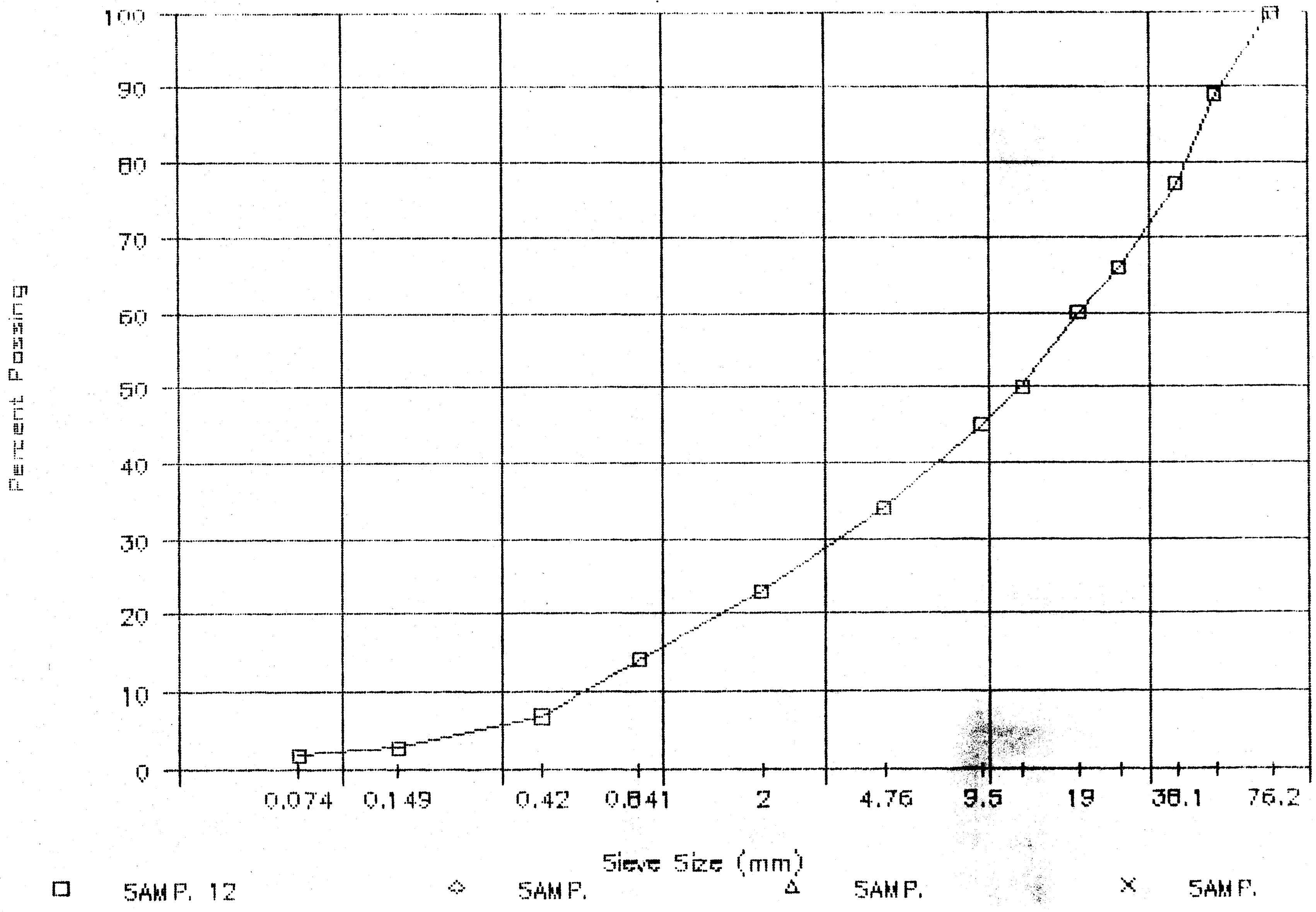
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 66
% SAND: 32
% FINES: 2

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-06



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-07
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.19

FIELD NO: 13
LAB NO: 2865
DEPTH: 1.5-2.0
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	96
38.1	85
25.4	77
19.0	70
12.7	61
9.5	56
4.76	43
2.38	--
2.00	30
1.19	--
0.841	19
0.595	--
0.42	11
0.297	--
0.177	--
0.149	4
0.074	2

M.C.(%): --

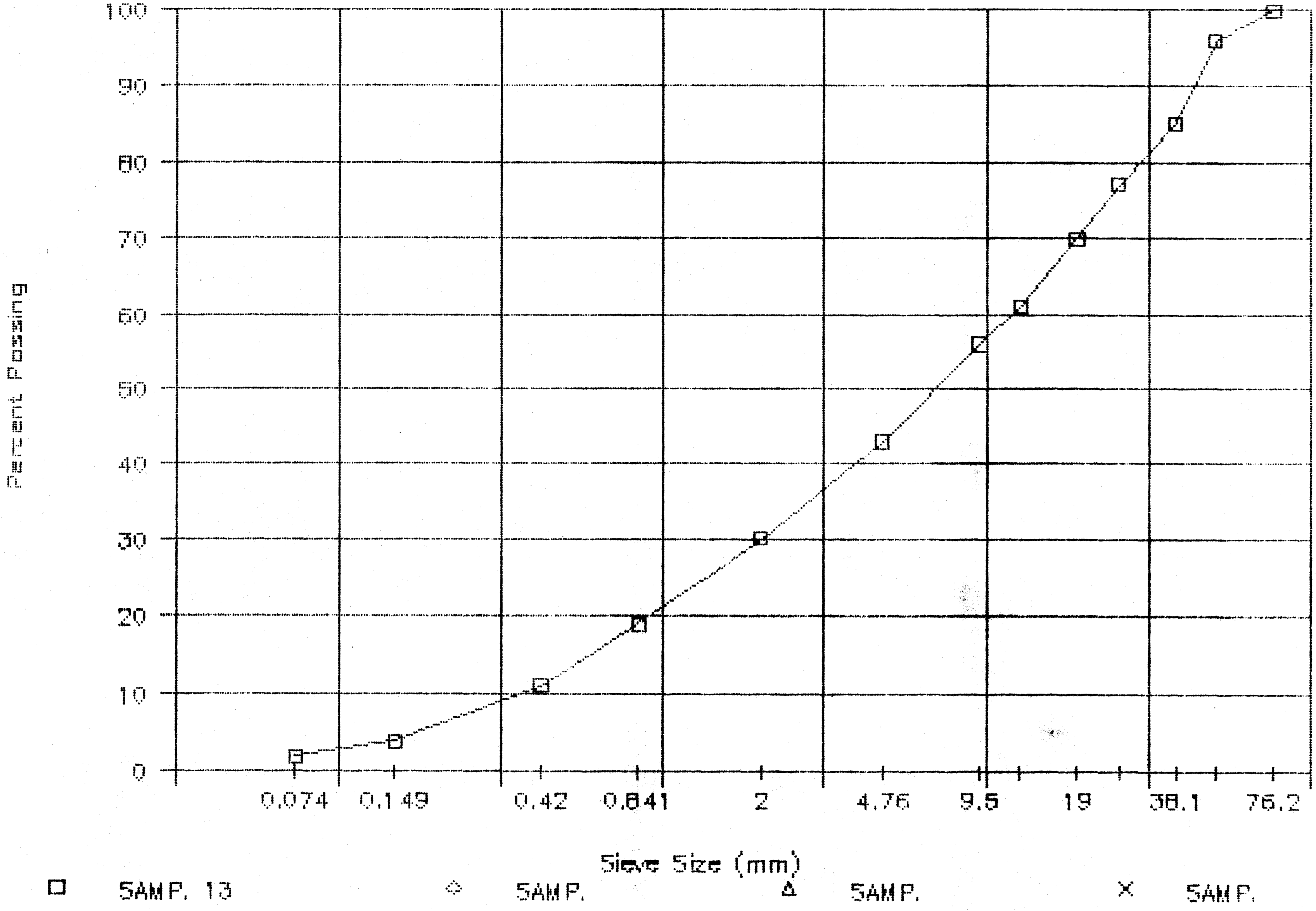
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 57
% SAND: 41
% FINES: 2

CLASSIFICATION:
POORLY GRADED
GRAVEL WITH SAND
(GP)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029—07



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-08
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.19

FIELD NO: 15
LAB NO: 2866
DEPTH: 3.5-4.0
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	95
25.4	85
19.0	75
12.7	67
9.5	62
4.76	50
2.38	--
2.00	36
1.19	--
0.841	21
0.595	--
0.42	12
0.297	--
0.177	--
0.149	5
0.074	3

M.C.(%): --

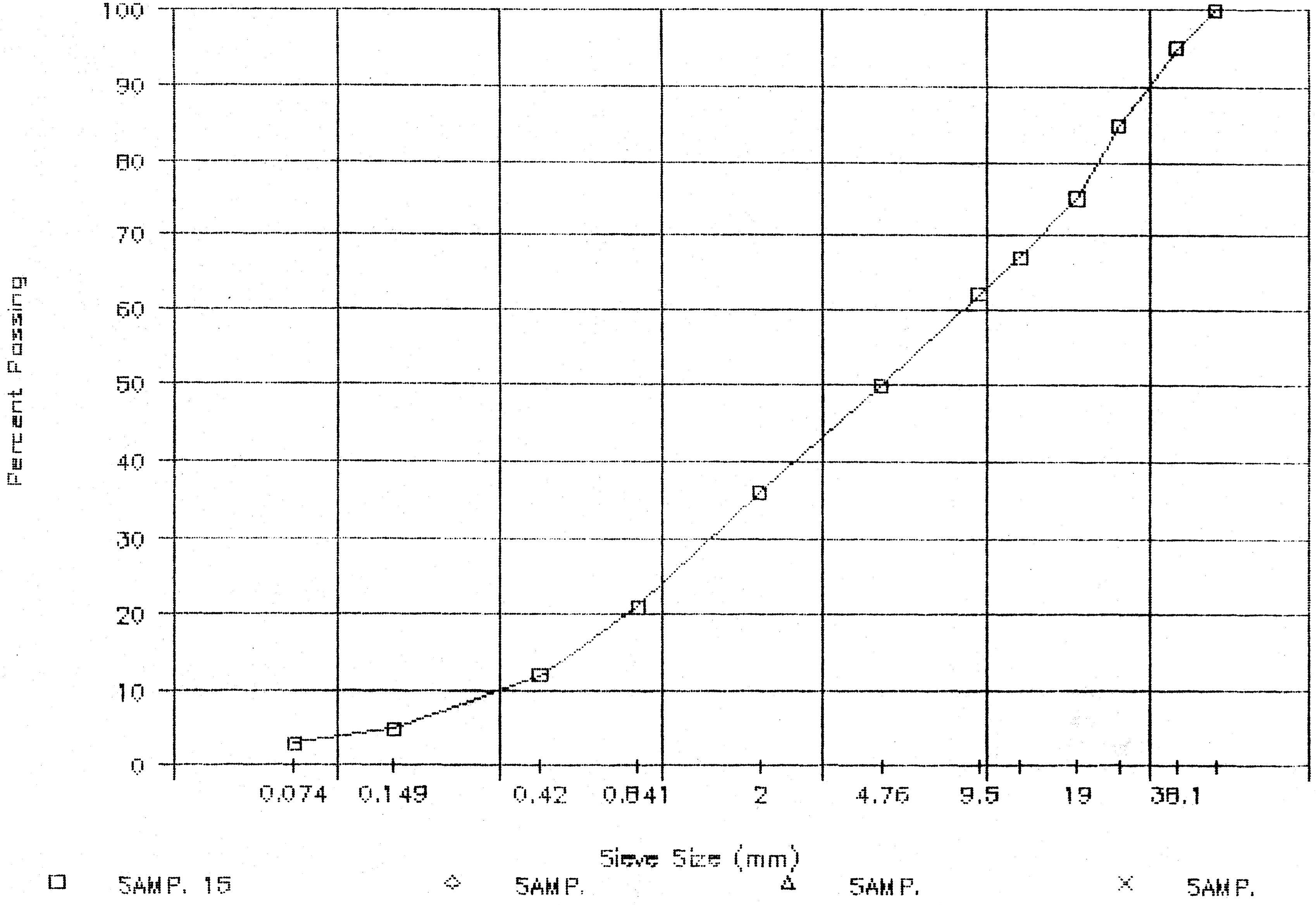
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 50
% SAND: 47
% FINES: 3

CLASSIFICATION:
POORLY GRADED
GRAVEL WITH SAND
(GP)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-08



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-09
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.20

FIELD NO: 16
LAB NO: 2867
DEPTH: 1.4-1.8
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	95
38.1	93
25.4	85
19.0	80
12.7	71
9.5	66
4.76	54
2.38	--
2.00	43
1.19	--
0.841	35
0.595	--
0.42	28
0.297	--
0.177	--
0.149	18
0.074	13

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 46
% SAND: 42
% FINES: 13

CLASSIFICATION:
SILTY GRAVEL WITH SAND (GM)

FIELD NO: 17
LAB NO: 2868
DEPTH: 3.3-3.7
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	97
25.4	84
19.0	75
12.7	65
9.5	59
4.76	47
2.38	--
2.00	36
1.19	--
0.841	27
0.595	--
0.42	21
0.297	--
0.177	--
0.149	10
0.074	5

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 53
% SAND: 42
% FINES: 5

CLASSIFICATION:
POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)

FIELD NO: 18
LAB NO: 2869
DEPTH: 5.0-5.5
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	92
19.0	89
12.7	81
9.5	74
4.76	60
2.38	--
2.00	44
1.19	--
0.841	31
0.595	--
0.42	22
0.297	--
0.177	--
0.149	11
0.074	7

M.C.(%): --

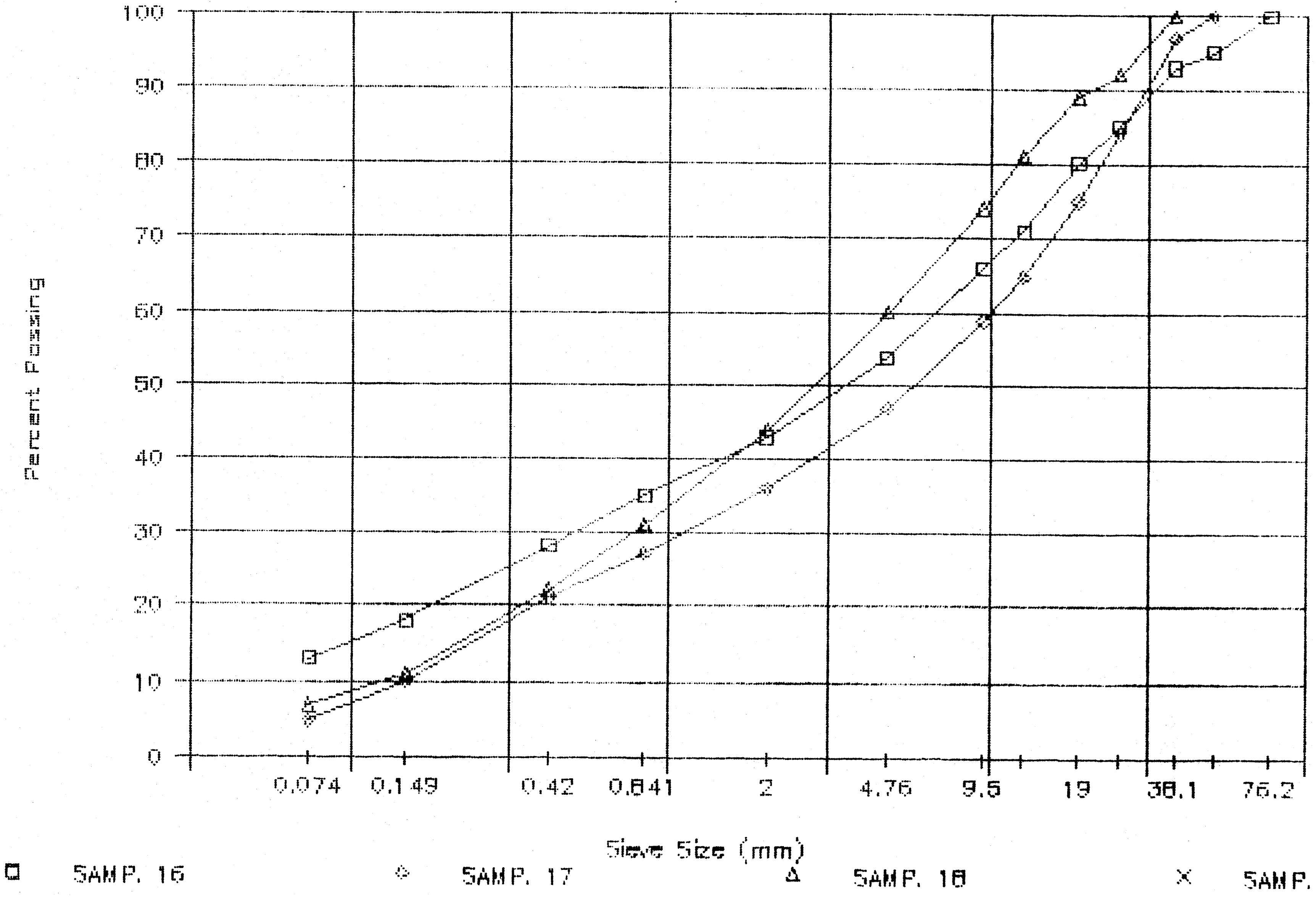
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 40
% SAND: 53
% FINES: 7

CLASSIFICATION:
WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-09



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-10
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.20

FIELD NO: 19
LAB NO: 2870
DEPTH: 1.6-2.1
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	92
38.1	89
25.4	85
19.0	83
12.7	77
9.5	72
4.76	64
2.38	--
2.00	56
1.19	--
0.841	49
0.595	--
0.42	43
0.297	--
0.177	--
0.149	29
0.074	19

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 36
% SAND: 45
% FINES: 19

CLASSIFICATION:
SILTY SAND WITH GRAVEL (SM)

FIELD NO: 20
LAB NO: 2871
DEPTH: 3.1-3.5
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	98
19.0	93
12.7	88
9.5	82
4.76	72
2.38	--
2.00	61
1.19	--
0.841	54
0.595	--
0.42	48
0.297	--
0.177	--
0.149	34
0.074	24

M.C.(%): --

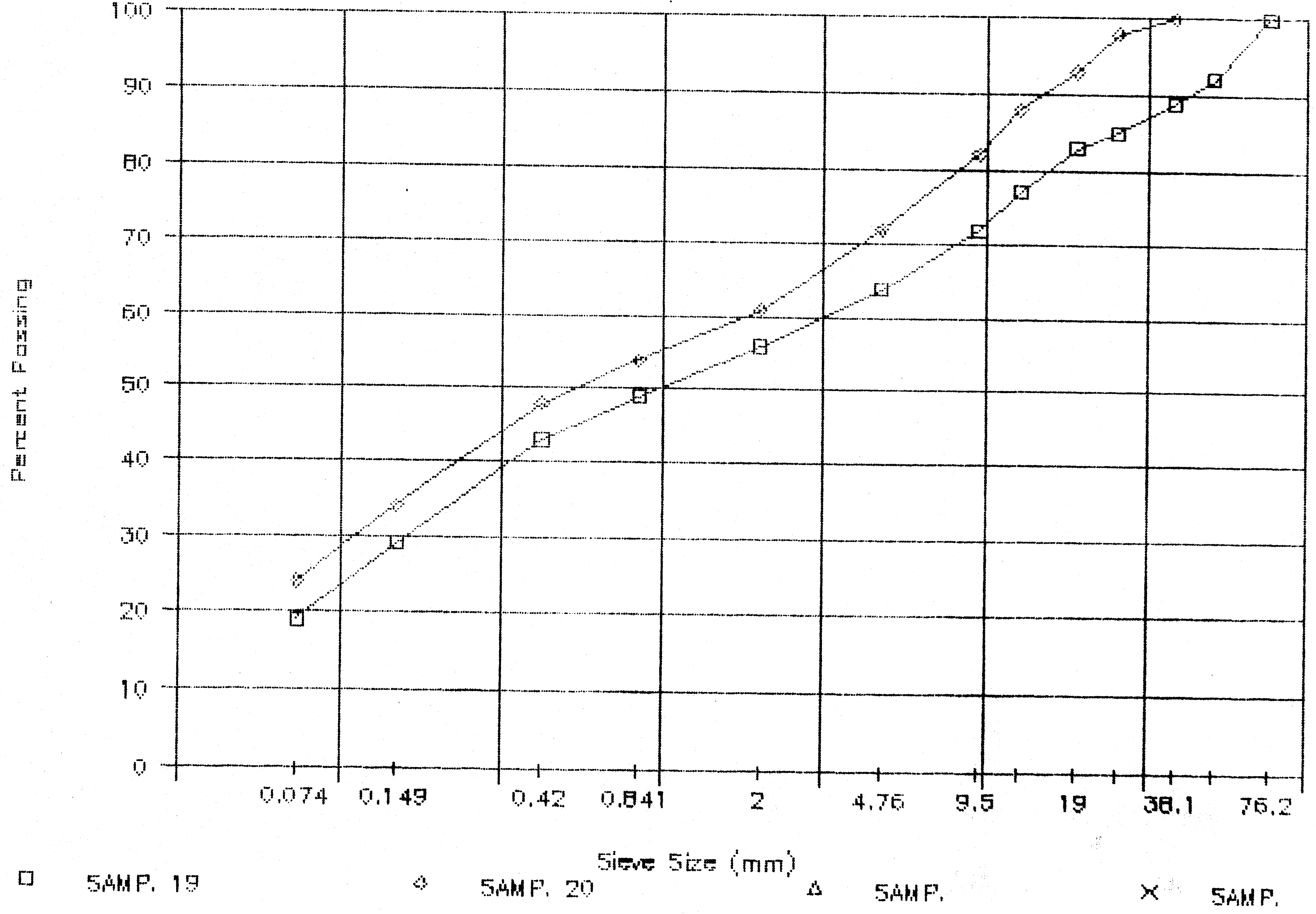
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 28
% SAND: 48
% FINES: 24

CLASSIFICATION:
SILTY SAND WITH GRAVEL (SM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-10



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-11
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.20

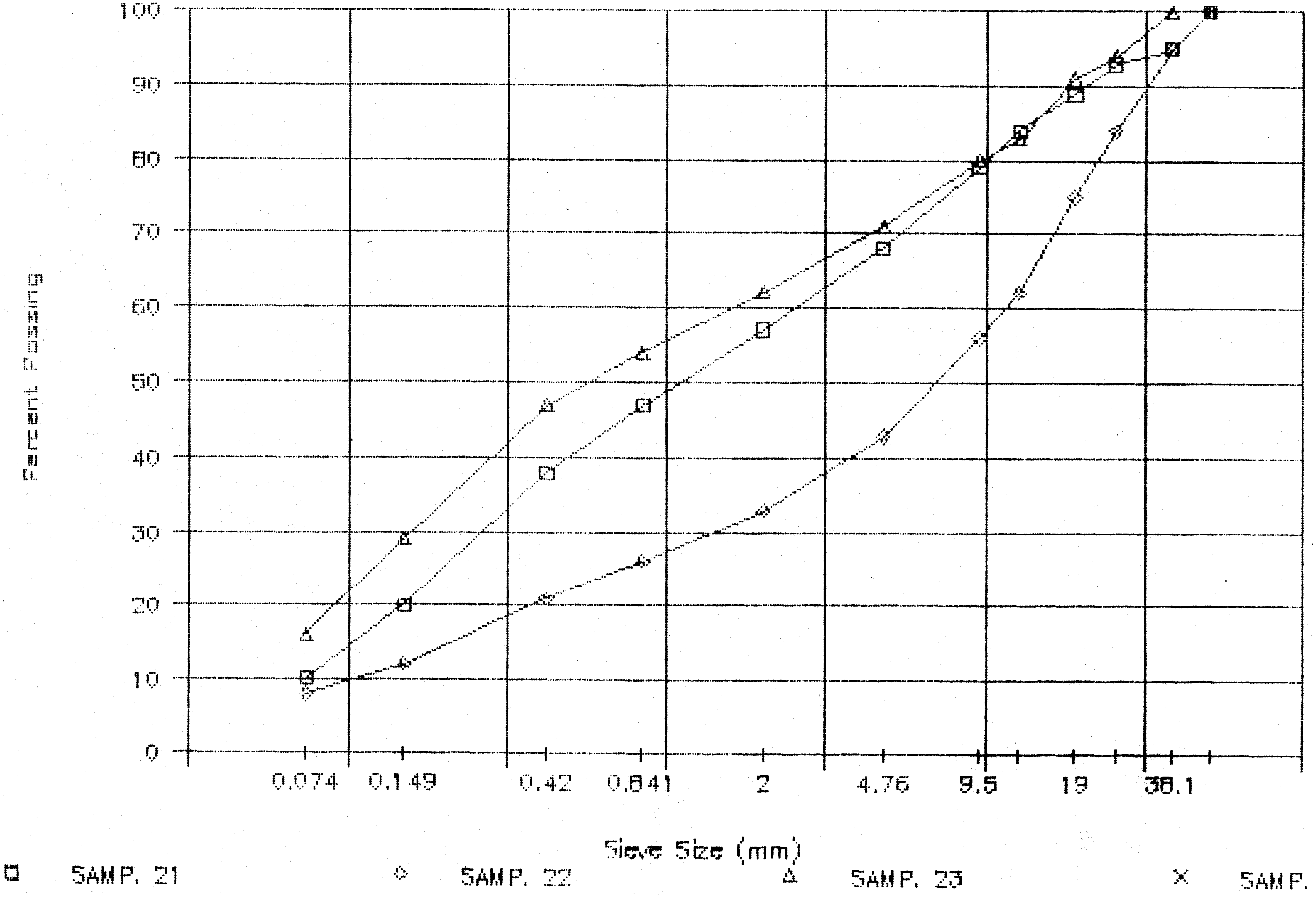
FIELD NO:	21	FIELD NO:	22	FIELD NO:	23
LAB NO:	2872	LAB NO:	2873	LAB NO:	2874
DEPTH:	1.6-2.0	DEPTH:	3.3-3.7	DEPTH:	5.1-5.5
TYPE:	BULK	TYPE:	BULK	TYPE:	ERR

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	--	101.6	--
76.2	--	76.2	--	76.2	--
50.8	100	50.8	100	50.8	--
38.1	95	38.1	95	38.1	100
25.4	93	25.4	84	25.4	94
19.0	89	19.0	75	19.0	91
12.7	84	12.7	62	12.7	83
9.5	79	9.5	56	9.5	80
4.76	68	4.76	43	4.76	71
2.38	--	2.38	--	2.38	--
2.00	57	2.00	33	2.00	62
1.19	--	1.19	--	1.19	--
0.841	47	0.841	26	0.841	54
0.595	--	0.595	--	0.595	--
0.42	32	0.42	21	0.42	47
0.297	--	0.297	--	0.297	--
0.177	--	0.177	--	0.177	--
0.149	20	0.149	12	0.149	29
0.074	10	0.074	8	0.074	16

M.C.(%):	--	M.C.(%):	--	M.C.(%):	--
LIMITS		LIMITS		LIMITS	
LIQUID:	--	LIQUID:	--	LIQUID:	--
PLASTIC:	--	PLASTIC:	--	PLASTIC:	--
P.I.:	N.P.	P.I.:	N.P.	P.I.:	N.P.
% GRAVEL:	32	% GRAVEL:	57	% GRAVEL:	29
% SAND:	58	% SAND:	36	% SAND:	55
% FINES:	10	% FINES:	8	% FINES:	16
CLASSIFICATION: POORLY GRADED SAND WITH SILT & GRAVEL (SP-SM)		CLASSIFICATION: WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)		CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)	

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-11



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-12
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.20

FIELD NO: 24
LAB NO: 2875
DEPTH: 1.7-2.1
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	92
19.0	87
12.7	80
9.5	74
4.76	64
2.38	--
2.00	53
1.19	--
0.841	42
0.595	--
0.42	31
0.297	--
0.177	--
0.149	11
0.074	5

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 36
% SAND: 59
% FINES: 5

CLASSIFICATION:
POORLY GRADED SAND WITH SILT & GRAVEL (SP-SM)

FIELD NO: 25
LAB NO: 2876
DEPTH: 3.3-3.6
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	99
19.0	96
12.7	94
9.5	91
4.76	87
2.38	--
2.00	81
1.19	--
0.841	75
0.595	--
0.42	70
0.297	--
0.177	--
0.149	54
0.074	36

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 13
% SAND: 51
% FINES: 36

CLASSIFICATION:
SILTY SAND (SM)

FIELD NO: 26
LAB NO: 2877
DEPTH: 5.1-5.5
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	94
19.0	88
12.7	80
9.5	74
4.76	62
2.38	--
2.00	48
1.19	--
0.841	36
0.595	--
0.42	26
0.297	--
0.177	--
0.149	13
0.074	7

M.C.(%): --

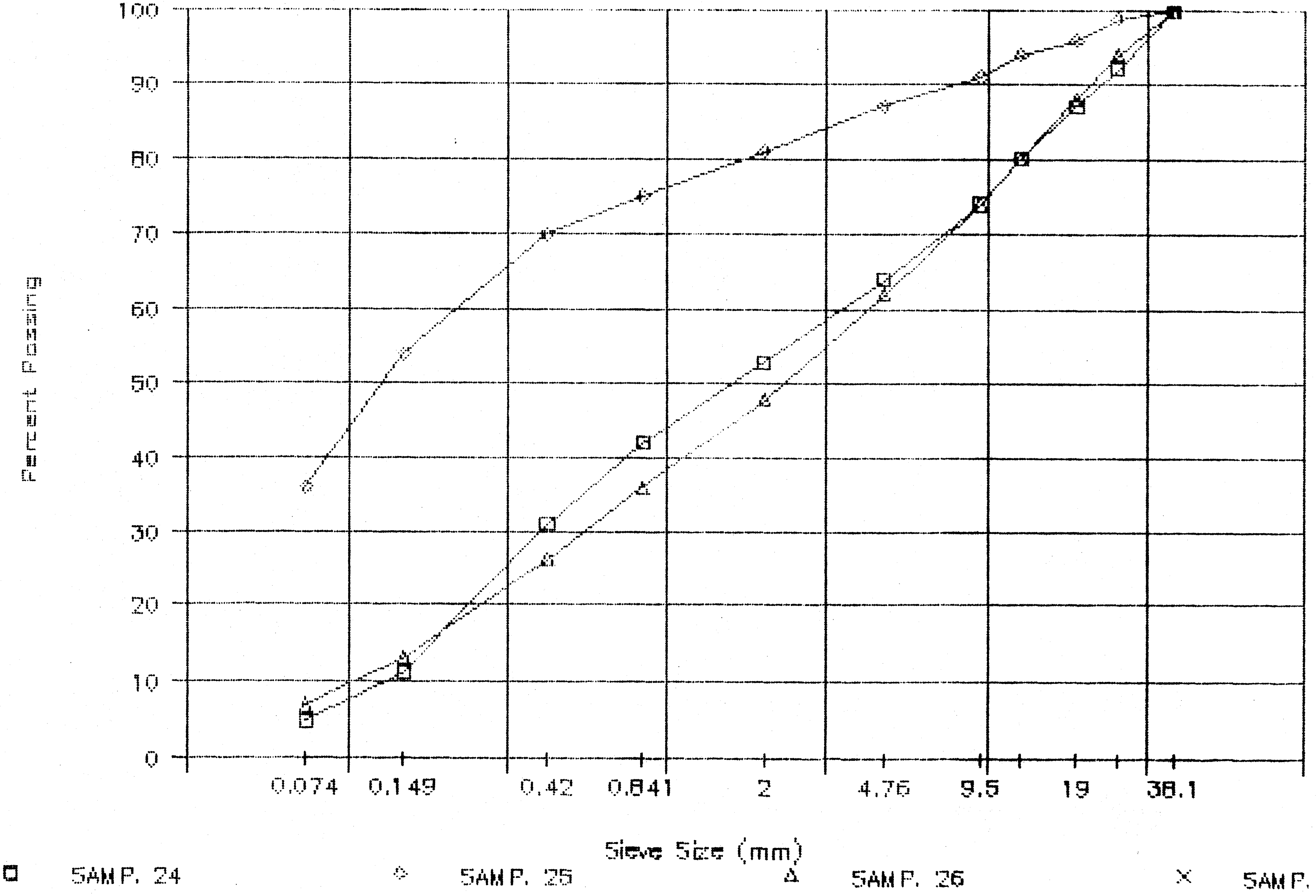
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 38
% SAND: 55
% FINES: 7

CLASSIFICATION:
POORLY GRADED SAND WITH SILT & GRAVEL (SP-SM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-12



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-13
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.20

FIELD NO: 27
LAB NO: 2878
DEPTH: 0.6-1.0
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	92
38.1	90
25.4	81
19.0	77
12.7	66
9.5	59
4.76	45
2.38	--
2.00	28
1.19	--
0.841	15
0.595	--
0.42	9
0.297	--
0.177	--
0.149	4
0.074	3

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 55
% SAND: 41
% FINES: 3

CLASSIFICATION:
WELL-GRADED GRAVEL WITH SAND (GW)

FIELD NO: 28
LAB NO: 2879
DEPTH: 3.1-3.6
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	93
38.1	91
25.4	79
19.0	75
12.7	66
9.5	59
4.76	46
2.38	--
2.00	30
1.19	--
0.841	16
0.595	--
0.42	7
0.297	--
0.177	--
0.149	2
0.074	1

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 54
% SAND: 45
% FINES: 1

CLASSIFICATION:
POORLY GRADED GRAVEL WITH SAND (GP)

FIELD NO: 29
LAB NO: 2880
DEPTH: 4.5-5.0
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	88
25.4	77
19.0	72
12.7	66
9.5	61
4.76	48
2.38	--
2.00	30
1.19	--
0.841	17
0.595	--
0.42	11
0.297	--
0.177	--
0.149	6
0.074	5

M.C.(%): --

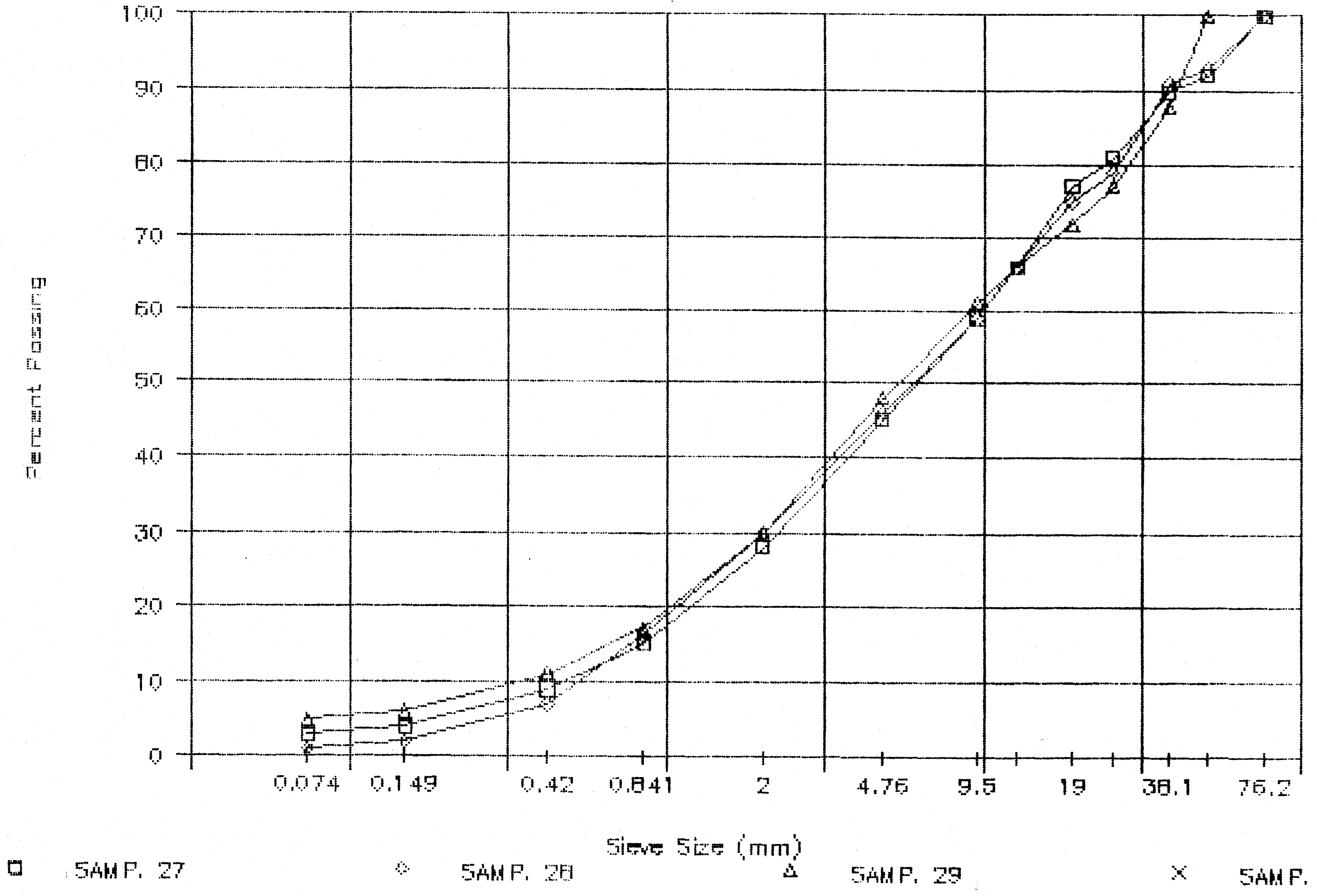
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 52
% SAND: 43
% FINES: 5

CLASSIFICATION:
WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-13



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-14
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.20

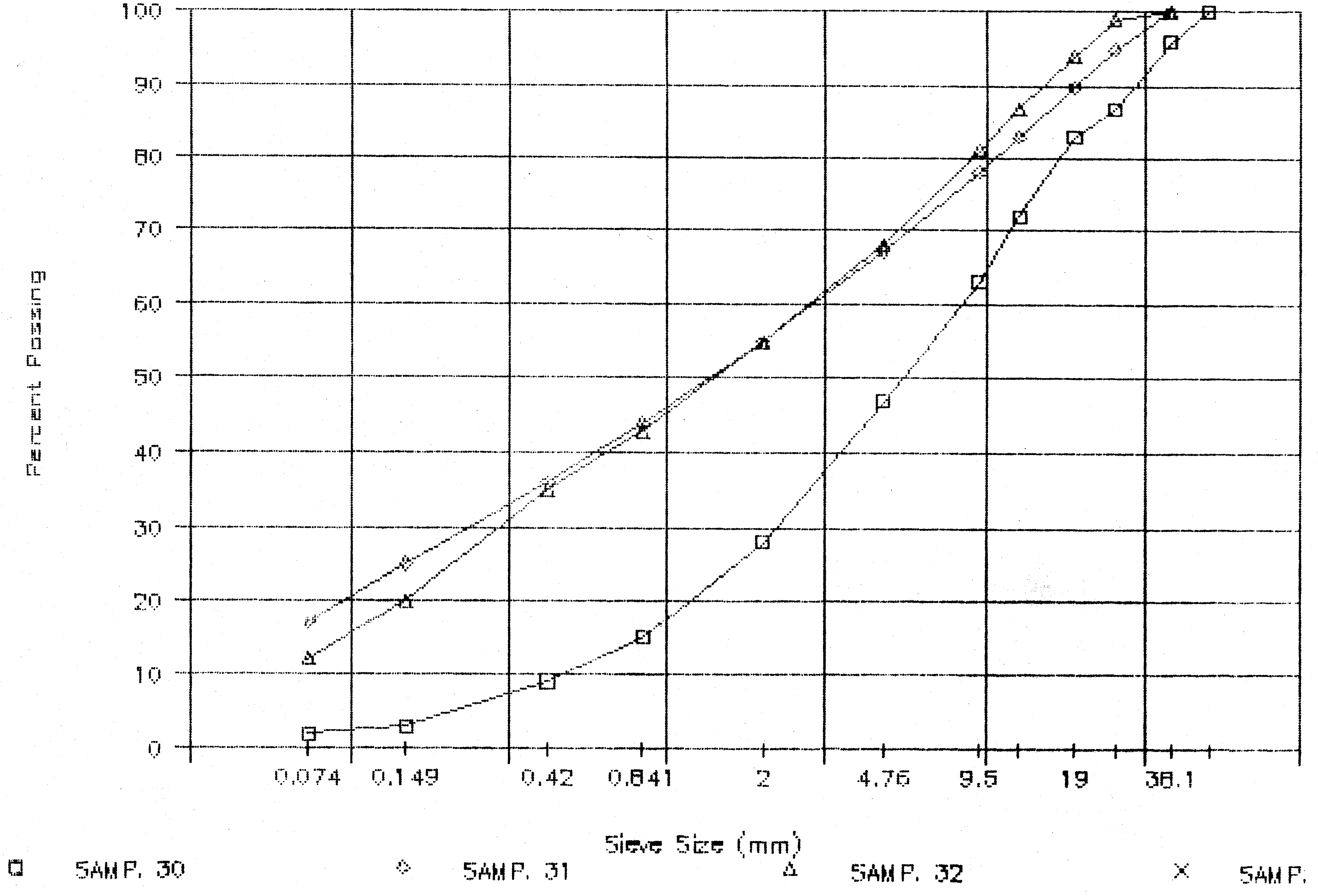
FIELD NO:	30	FIELD NO:	31.00	FIELD NO:	32.00
LAB NO:	2881	LAB NO:	2882	LAB NO:	2883
DEPTH:	1.6-2.0	DEPTH:	3.6-4.0	DEPTH:	5.2-5.4
TYPE:	BULK	TYPE:	BULK	TYPE:	BULK

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	--	101.6	--
76.2	--	76.2	--	76.2	--
50.8	100	50.8	--	50.8	--
38.1	96	38.1	100	38.1	100
25.4	87	25.4	95	25.4	99
19.0	83	19.0	90	19.0	94
12.7	72	12.7	83	12.7	87
9.5	63	9.5	78	9.5	81
4.76	47	4.76	67	4.76	68
2.38	--	2.38	--	2.38	--
2.00	28	2.00	55	2.00	55
1.19	--	1.19	--	1.19	--
0.841	15	0.841	44	0.841	43
0.595	--	0.595	--	0.595	--
0.42	9	0.42	36	0.42	35
0.297	--	0.297	--	0.297	--
0.177	--	0.177	--	0.177	--
0.149	3	0.149	25	0.149	20
0.074	2	0.074	17	0.074	12

M.C.(%):	--	M.C.(%):	--	M.C.(%):	--
LIMITS		LIMITS		LIMITS	
LIQUID:	--	LIQUID:	--	LIQUID:	--
PLASTIC:	--	PLASTIC:	--	PLASTIC:	--
P.I.:	N.P.	P.I.:	N.P.	P.I.:	N.P.
% GRAVEL:	53	% GRAVEL:	33.00	% GRAVEL:	32.00
% SAND:	45	% SAND:	50.00	% SAND:	56.00
% FINES:	2	% FINES:	17.00	% FINES:	12.00
CLASSIFICATION:	WELL-GRADED GRAVEL WITH SAND (GW)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-14



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-15
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.20

FIELD NO: 33
LAB NO: 2884
DEPTH: 0.8-1.2
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	85
38.1	84
25.4	72
19.0	66
12.7	56
9.5	50
4.76	38
2.38	--
2.00	24
1.19	--
0.841	14
0.595	--
0.42	22
0.297	--
0.177	--
0.149	2
0.074	1

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 62
% SAND: 37
% FINES: 1

CLASSIFICATION:
WELL-GRADED GRAVEL WITH SAND (GW)

FIELD NO: 34
LAB NO: 2885
DEPTH: 3.0-3.4
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	93
25.4	85
19.0	75
12.7	63
9.5	56
4.76	43
2.38	--
2.00	30
1.19	--
0.841	19
0.595	--
0.42	12
0.297	--
0.177	--
0.149	4
0.074	3

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 57
% SAND: 40
% FINES: 3

CLASSIFICATION:
WELL-GRADED GRAVEL WITH SAND (GW)

FIELD NO: 35
LAB NO: 2886
DEPTH: 4.8-5.2
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	100
76.2	73
50.8	64
38.1	60
25.4	54
19.0	50
12.7	44
9.5	39
4.76	32
2.38	--
2.00	23
1.19	--
0.841	15
0.595	--
0.42	9
0.297	--
0.177	--
0.149	4
0.074	3

M.C.(%): --

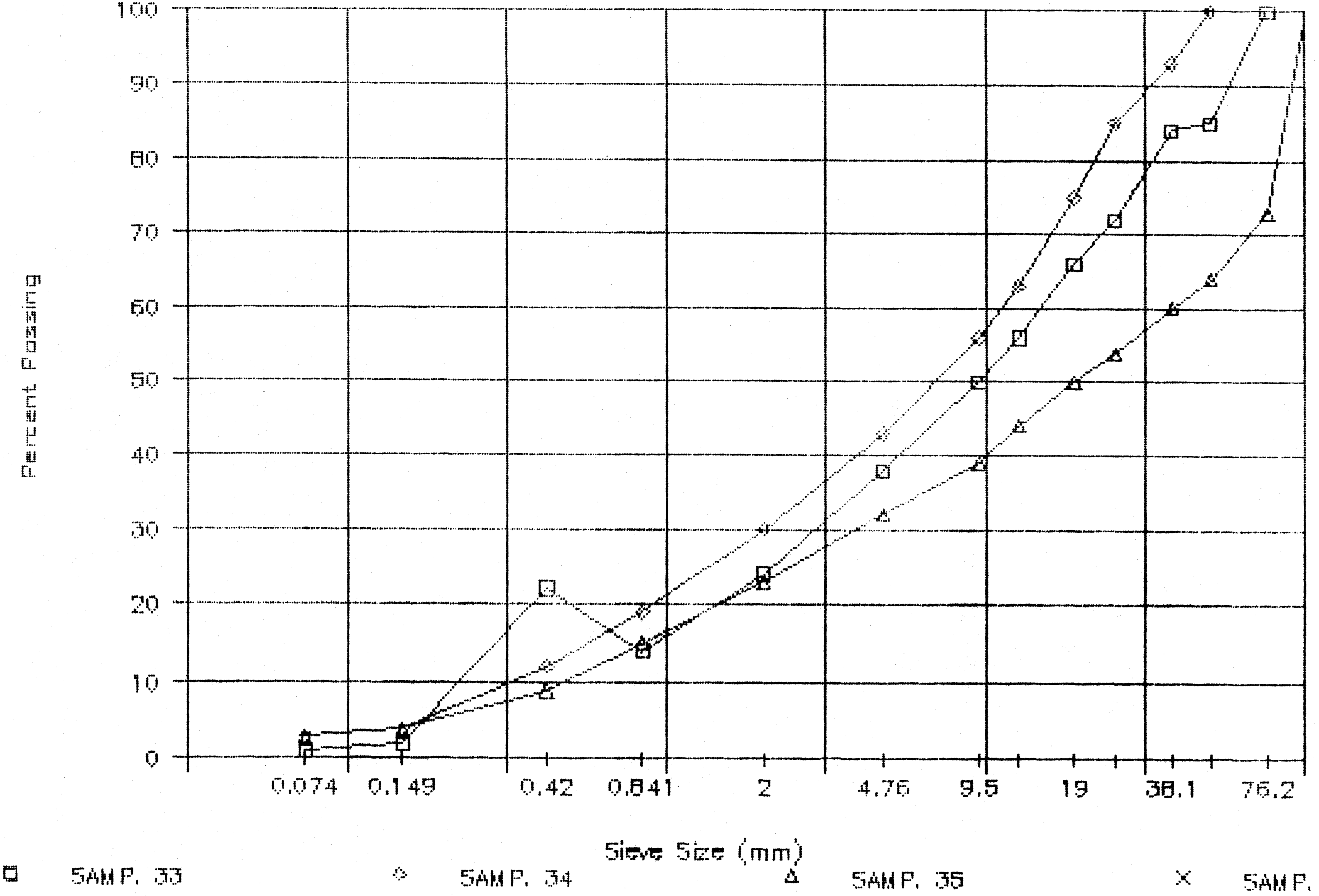
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 68
% SAND: 28
% FINES: 3

CLASSIFICATION:
POORLY GRADED GRAVEL WITH SAND (GP)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-15



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-16
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.21

FIELD NO: 36
LAB NO: 2887
DEPTH: 1.5-1.9
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	91
38.1	79
25.4	72
19.0	65
12.7	58
9.5	53
4.76	42
2.38	--
2.00	30
1.19	--
0.841	20
0.595	--
0.42	13
0.297	--
0.177	--
0.149	5
0.074	4

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 58
% SAND: 38
% FINES: 4

CLASSIFICATION:
POORLY GRADED
GRAVEL WITH SAND
(GP)

FIELD NO: 37
LAB NO: 2888
DEPTH: 2.6-3.0
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	80
25.4	70
19.0	61
12.7	54
9.5	49
4.76	41
2.38	--
2.00	31
1.19	--
0.841	20
0.595	--
0.42	11
0.297	--
0.177	--
0.149	4
0.074	3

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 59
% SAND: 38
% FINES: 3

CLASSIFICATION:
POORLY GRADED
GRAVEL WITH SAND
(GP)

FIELD NO: 38
LAB NO: 2889
DEPTH: 4.6-5.0
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	73
38.1	68
25.4	60
19.0	56
12.7	48
9.5	44
4.76	34
2.38	--
2.00	24
1.19	--
0.841	16
0.595	--
0.42	11
0.297	--
0.177	--
0.149	4
0.074	2

M.C.(%): --

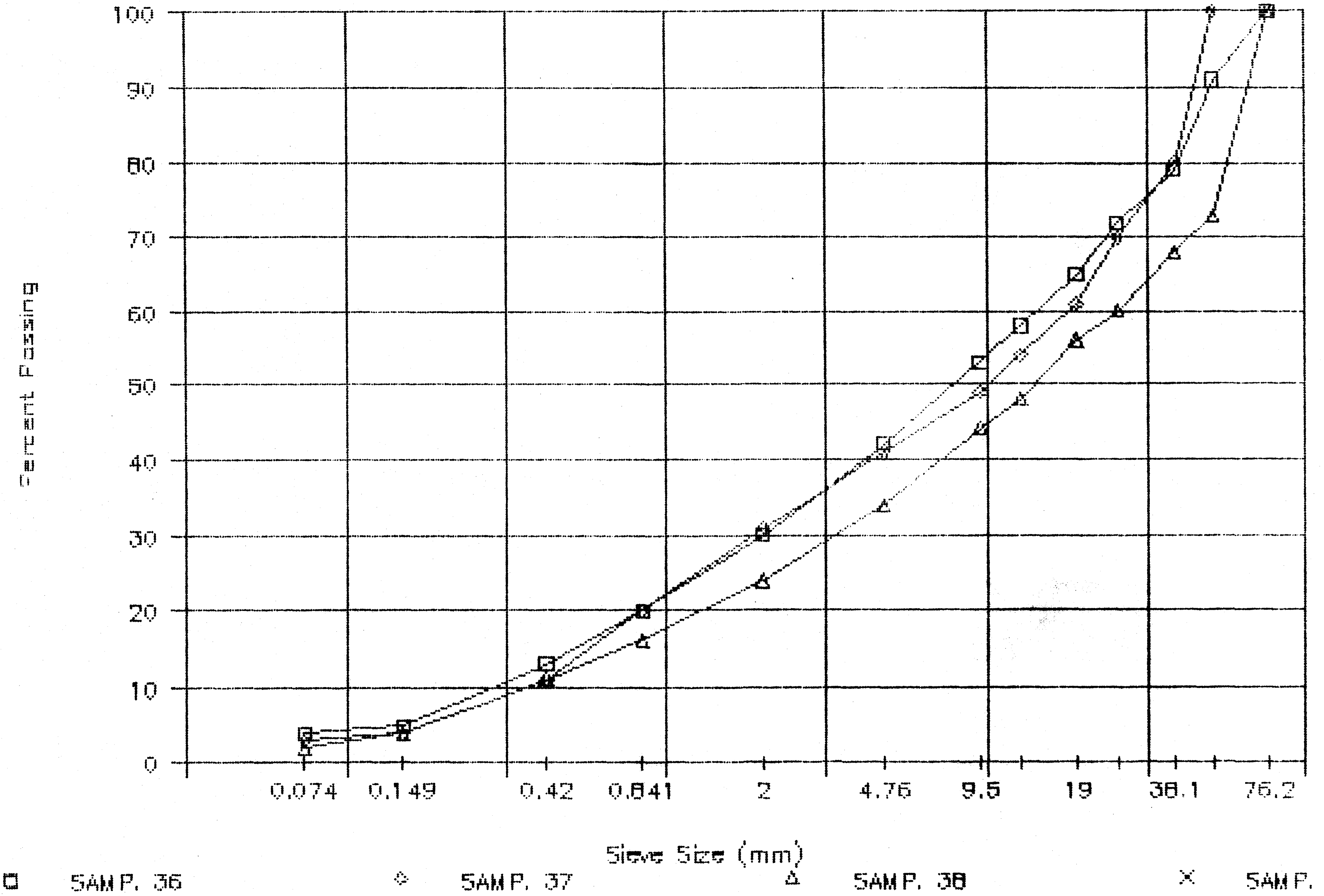
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 66
% SAND: 32
% FINES: 2

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-16



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-17
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.21

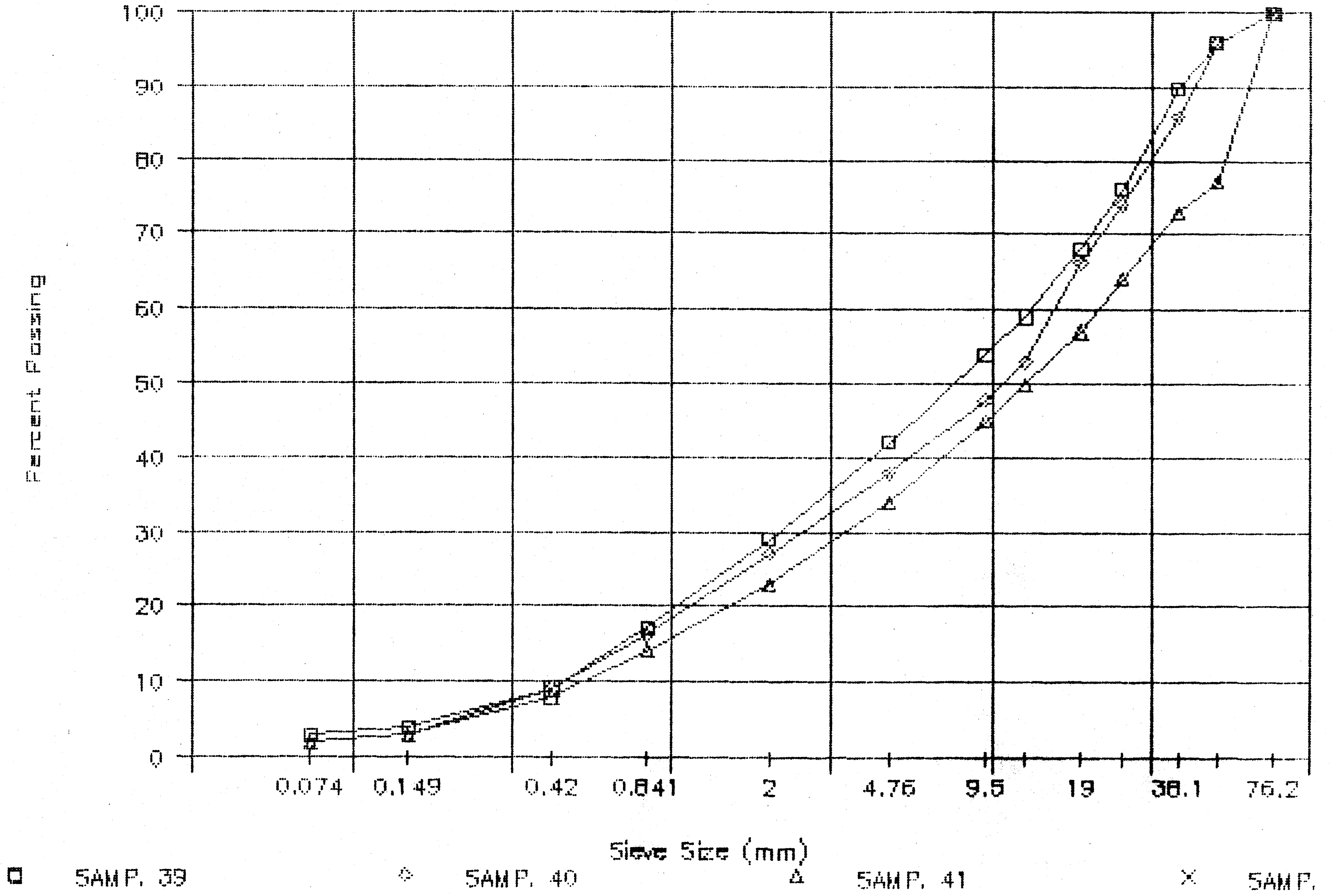
FIELD NO:	39	FIELD NO:	40	FIELD NO:	41
LAB NO:	2890	LAB NO:	2891	LAB NO:	2892
DEPTH:	1.1-1.5	DEPTH:	2.6-3.0	DEPTH:	4.6-5.0
TYPE:	BULK	TYPE:	BULK	TYPE:	BULK

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	--	101.6	--
76.2	100	76.2	100	76.2	100
50.8	96	50.8	96	50.8	77
38.1	90	38.1	86	38.1	73
25.4	76	25.4	74	25.4	64
19.0	68	19.0	66	19.0	57
12.7	59	12.7	53	12.7	50
9.5	54	9.5	48	9.5	45
4.76	42	4.76	38	4.76	34
2.38	--	2.38	--	2.38	--
2.00	29	2.00	27	2.00	23
1.19	--	1.19	--	1.19	--
0.841	17	0.841	16	0.841	14
0.595	--	0.595	--	0.595	--
0.42	9	0.42	9	0.42	8
0.297	--	0.297	--	0.297	--
0.177	--	0.177	--	0.177	--
0.149	4	0.149	3	0.149	3
0.074	3	0.074	2	0.074	2

M.C.(%):	--	M.C.(%):	--	M.C.(%):	--
LIMITS		LIMITS		LIMITS	
LIQUID:	--	LIQUID:	--	LIQUID:	--
PLASTIC:	--	PLASTIC:	--	PLASTIC:	--
P.I.:	N.P.	P.I.:	N.P.	P.I.:	N.P.
% GRAVEL:	58	% GRAVEL:	62	% GRAVEL:	66
% SAND:	39	% SAND:	35	% SAND:	32
% FINES:	3	% FINES:	2	% FINES:	2
CLASSIFICATION: POORLY GRADED GRAVEL WITH SAND (GP)		CLASSIFICATION: POORLY GRADED GRAVEL WITH SAND (GP)		CLASSIFICATION: WELL-GRADED GRAVEL WITH SAND (GW)	

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-17



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-18
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.21

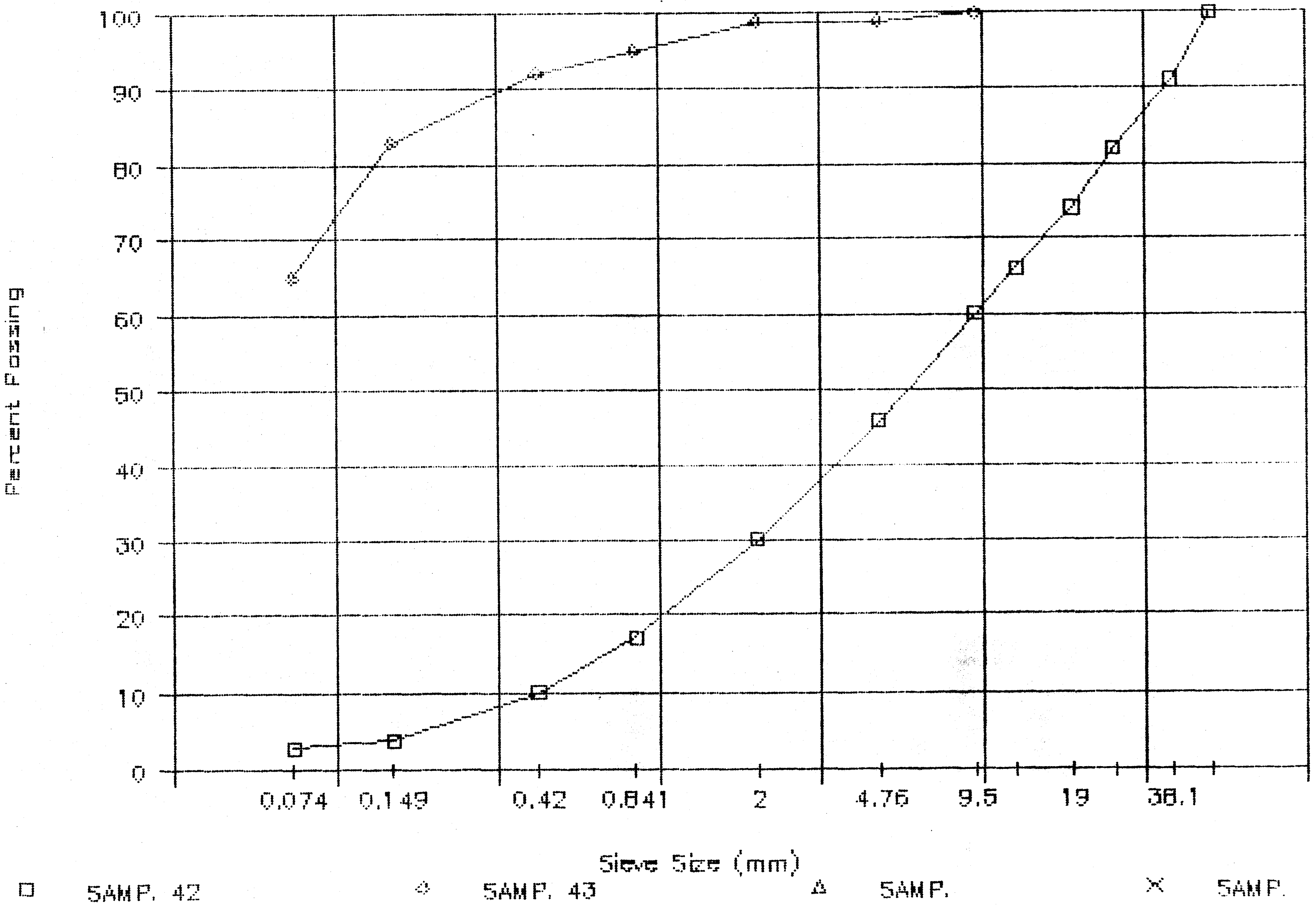
FIELD NO:	42	FIELD NO:	43
LAB NO:	2893	LAB NO:	2894
DEPTH:	2.4-2.8	DEPTH:	3.8-4.2
TYPE:	BULK	TYPE:	BULK

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	--
76.2	--	76.2	--
50.8	100	50.8	--
38.1	91	38.1	--
25.4	82	25.4	--
19.0	74	19.0	--
12.7	66	12.7	--
9.5	60	9.5	100
4.76	46	4.76	99
2.38	--	2.38	--
2.00	30	2.00	99
1.19	--	1.19	--
0.841	17	0.841	95
0.595	--	0.595	--
0.42	10	0.42	92
0.297	--	0.297	--
0.177	--	0.177	--
0.149	4	0.149	83
0.074	3	0.074	65

M.C.(%):	--	M.C.(%):	--
LIMITS		LIMITS	
LIQUID:	--	LIQUID:	--
PLASTIC:	--	PLASTIC:	--
P.I.:	N.P.	P.I.:	N.P.
% GRAVEL:	54	% GRAVEL:	1
% SAND:	43	% SAND:	35
% FINES:	3	% FINES:	65
CLASSIFICATION: WELL-GRADED GRAVEL WITH SAND (GW)		CLASSIFICATION: SANDY SILT (ML)	

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-18



PROJECT NUMBER:	115-G-04	HOLE NUMBER:	029-19
CLIENT:	PWC CAPITAL - Y.T.		
PROJECT NAME:	ALASKA HIGHWAY PRE-ENGINEERING		
PROJECT LOCATION:	A/H KM 1749.5 LHS		
DRILL UNIT:	CAT 225 HOE		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	DT	DATE COMPLETED:	88.10.21

FIELD NO: 44
LAB NO: 2895
DEPTH: 1.6-2.0
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	93
25.4	85
19.0	80
12.7	71
9.5	66
4.76	54
2.38	--
2.00	40
1.19	--
0.841	26
0.595	--
0.42	15
0.297	--
0.177	--
0.149	5
0.074	3

M.C.(%): --

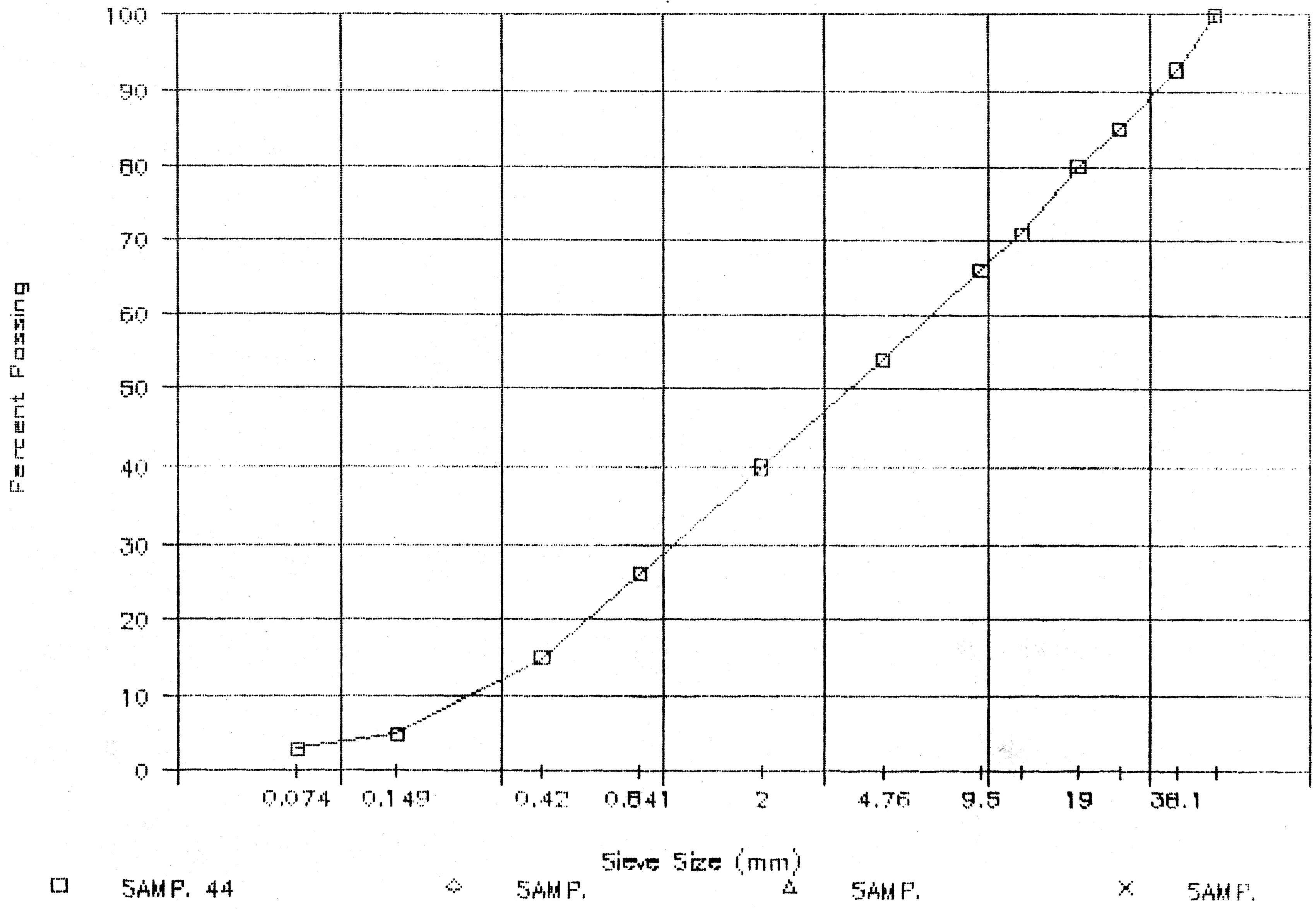
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 46
% SAND: 51
% FINES: 3

CLASSIFICATION:
POORLY GRADED
SAND WITH GRAVEL
(SP)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-19



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-20
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.21

FIELD NO: 45
LAB NO: 2896
DEPTH: 0.8-1.2
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	95
38.1	81
25.4	70
19.0	64
12.7	55
9.5	48
4.76	35
2.38	--
2.00	24
1.19	--
0.841	17
0.595	--
0.42	12
0.297	--
0.177	--
0.149	4
0.074	2

M.C.(%): --

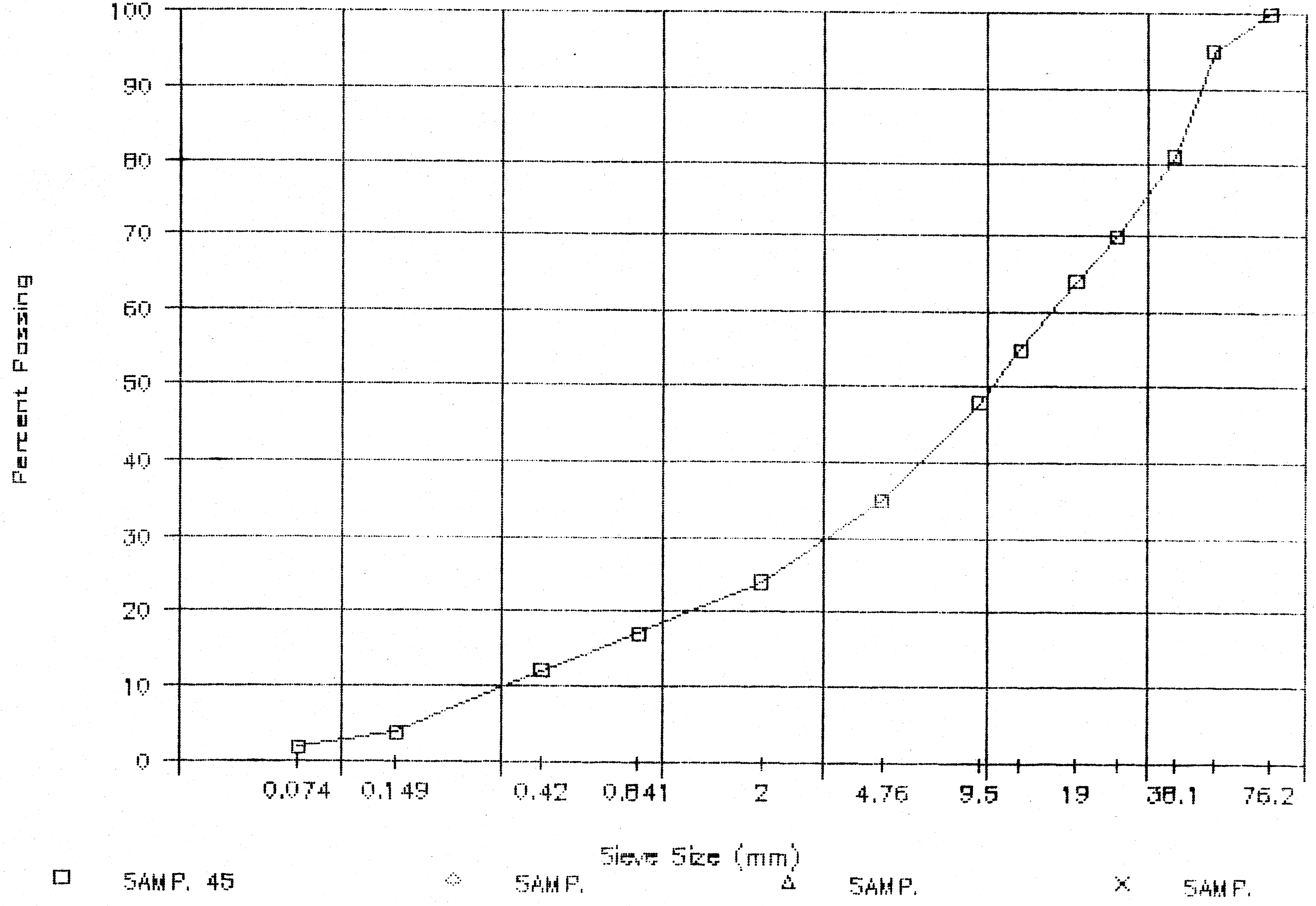
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 65
% SAND: 33
% FINES: 2

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-20



PROJECT NUMBER: 115-G-04
HOLE NUMBER: 030-22
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT
DATE COMPLETED: 88.10.21

FIELD NO: 47
LAB NO: 2897
DEPTH: 0.8-1.2
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	91
38.1	81
25.4	68
19.0	60
12.7	54
9.5	49
4.76	38
2.38	--
2.00	27
1.19	--
0.841	19
0.595	--
0.42	11
0.297	--
0.177	--
0.149	4
0.074	3

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 62
% SAND: 35
% FINES: 3

CLASSIFICATION:
POORLY GRADED GRAVEL WITH SAND (GP)

FIELD NO: 48
LAB NO: 2898
DEPTH: 2.6-3.0
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	100
76.2	87
50.8	76
38.1	73
25.4	58
19.0	52
12.7	43
9.5	38
4.76	29
2.38	--
2.00	19
1.19	--
0.841	12
0.595	--
0.42	8
0.297	--
0.177	--
0.149	4
0.074	3

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 71
% SAND: 26
% FINES: 3

CLASSIFICATION:
WELL-GRADED GRAVEL WITH SAND (GW)

FIELD NO: 49
LAB NO: 2899
DEPTH: 4.3-4.7
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	85
38.1	75
25.4	60
19.0	54
12.7	43
9.5	36
4.76	25
2.38	--
2.00	17
1.19	--
0.841	11
0.595	--
0.42	7
0.297	--
0.177	--
0.149	3
0.074	2

M.C.(%): --

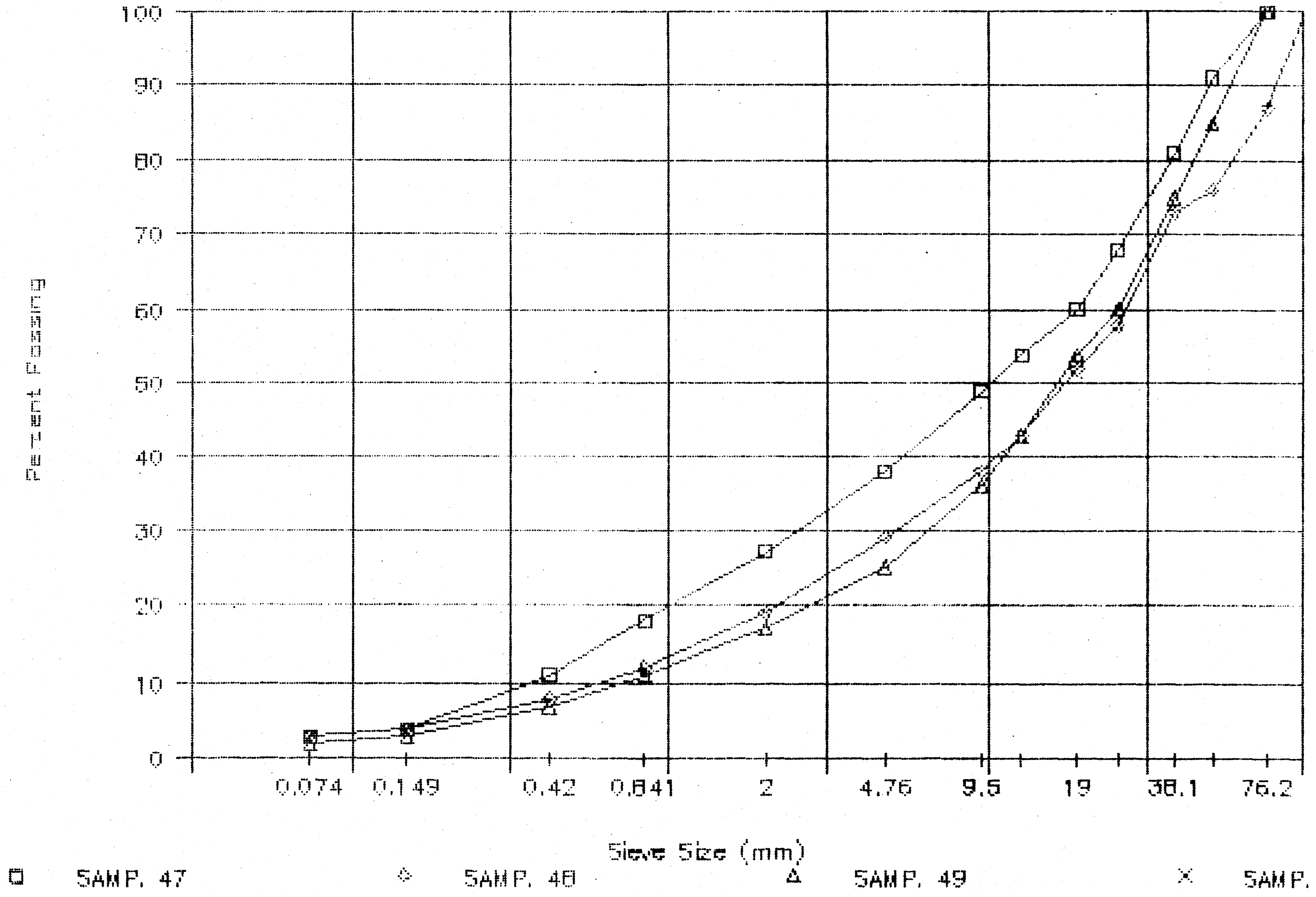
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 75
% SAND: 23
% FINES: 2

CLASSIFICATION:
WELL-GRADED GRAVEL WITH SAND (GW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis - Hole 030-22



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-23
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: C.B. DATE COMPLETED: 88.10.22

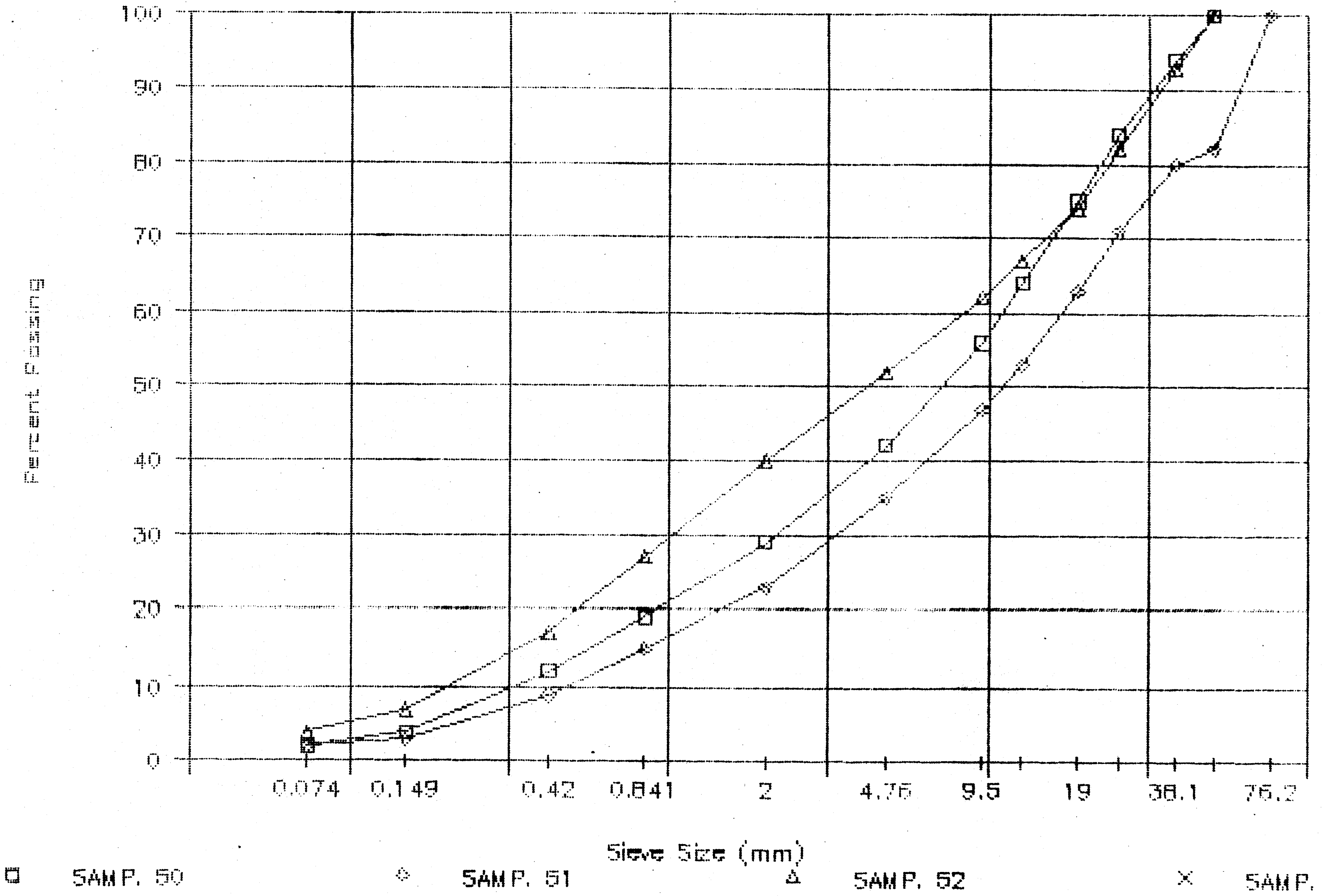
FIELD NO:	50	FIELD NO:	51	FIELD NO:	52
LAB NO:	2900	LAB NO:	2901	LAB NO:	2902
DEPTH:	0.8-1.2	DEPTH:	2.8-3.2	DEPTH:	3.9-4.3
TYPE:	BULK	TYPE:	BULK	TYPE:	BULK

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	--	101.6	--
76.2	--	76.2	100	76.2	--
50.8	100	50.8	82	50.8	100
38.1	94	38.1	80	38.1	93
25.4	84	25.4	71	25.4	82
19.0	75	19.0	63	19.0	74
12.7	64	12.7	53	12.7	67
9.5	56	9.5	47	9.5	62
4.76	42	4.76	35	4.76	52
2.38	--	2.38	--	2.38	--
2.00	29	2.00	23	2.00	40
1.19	--	1.19	--	1.19	--
0.841	19	0.841	15	0.841	27
0.595	--	0.595	--	0.595	--
0.42	12	0.42	9	0.42	17
0.297	--	0.297	--	0.297	--
0.177	--	0.177	--	0.177	--
0.149	4	0.149	3	0.149	7
0.074	2	0.074	2	0.074	4

M.C.(%):	--	M.C.(%):	--	M.C.(%):	--
LIMITS		LIMITS		LIMITS	
LIQUID:	--	LIQUID:	--	LIQUID:	--
PLASTIC:	--	PLASTIC:	--	PLASTIC:	--
P.I.:	N.P.	P.I.:	N.P.	P.I.:	N.P.
% GRAVEL:	58	% GRAVEL:	65	% GRAVEL:	48
% SAND:	40	% SAND:	33	% SAND:	48
% FINES:	2	% FINES:	2	% FINES:	4
CLASSIFICATION: WELL-GRADED GRAVEL WITH SAND (GW)		CLASSIFICATION: WELL-GRADED GRAVEL WITH SAND (GW)		CLASSIFICATION: POORLY GRADED SAND WITH GRAVEL (SP)	

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030-23



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-24
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: [redacted]CB DATE COMPLETED: 88.10.22

FIELD NO: 53
LAB NO: 2903
DEPTH: 2.8-3.2
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	83
38.1	74
25.4	71
19.0	67
12.7	62
9.5	58
4.76	51
2.38	--
2.00	43
1.19	--
0.841	36
0.595	--
0.42	30
0.297	--
0.177	--
0.149	18
0.074	11

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 49
% SAND: 40
% FINES: 11

CLASSIFICATION:
POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)

FIELD NO: 54
LAB NO: 2904
DEPTH: 4.0-4.4
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	93
38.1	82
25.4	76
19.0	71
12.7	63
9.5	57
4.76	47
2.38	--
2.00	37
1.19	--
0.841	27
0.595	--
0.42	21
0.297	--
0.177	--
0.149	12
0.074	8

M.C.(%): --

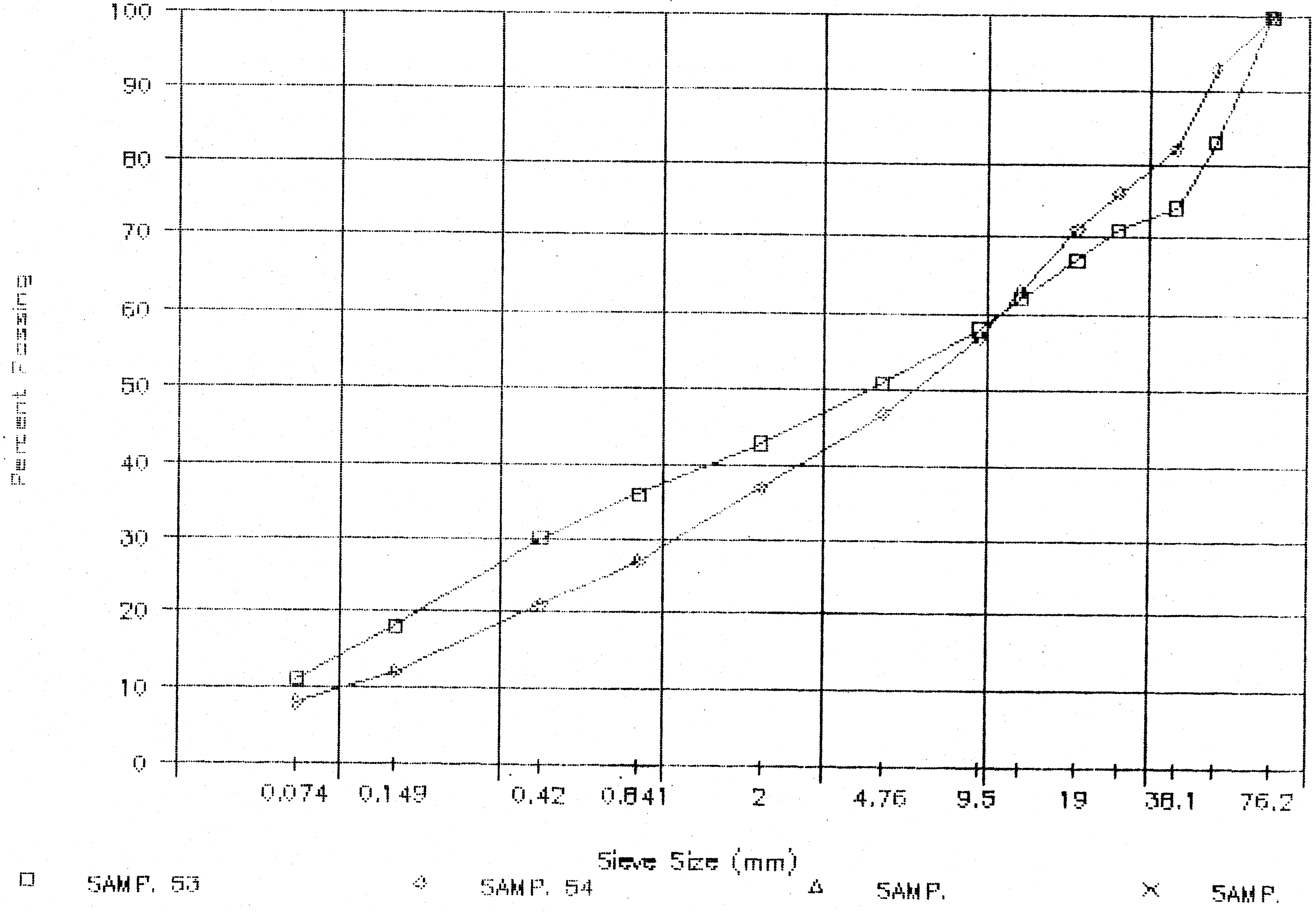
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 53
% SAND: 39
% FINES: 8

CLASSIFICATION:
WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030–24



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-25
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: [redacted] CB DATE COMPLETED: 88.10.22

FIELD NO: 55
LAB NO: 2905
DEPTH: 1.2-1.6
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	98
25.4	97
19.0	94
12.7	88
9.5	83
4.76	71
2.38	--
2.00	56
1.19	--
0.841	45
0.595	--
0.42	36
0.297	--
0.177	--
0.149	15
0.074	7

M.C.(%): --

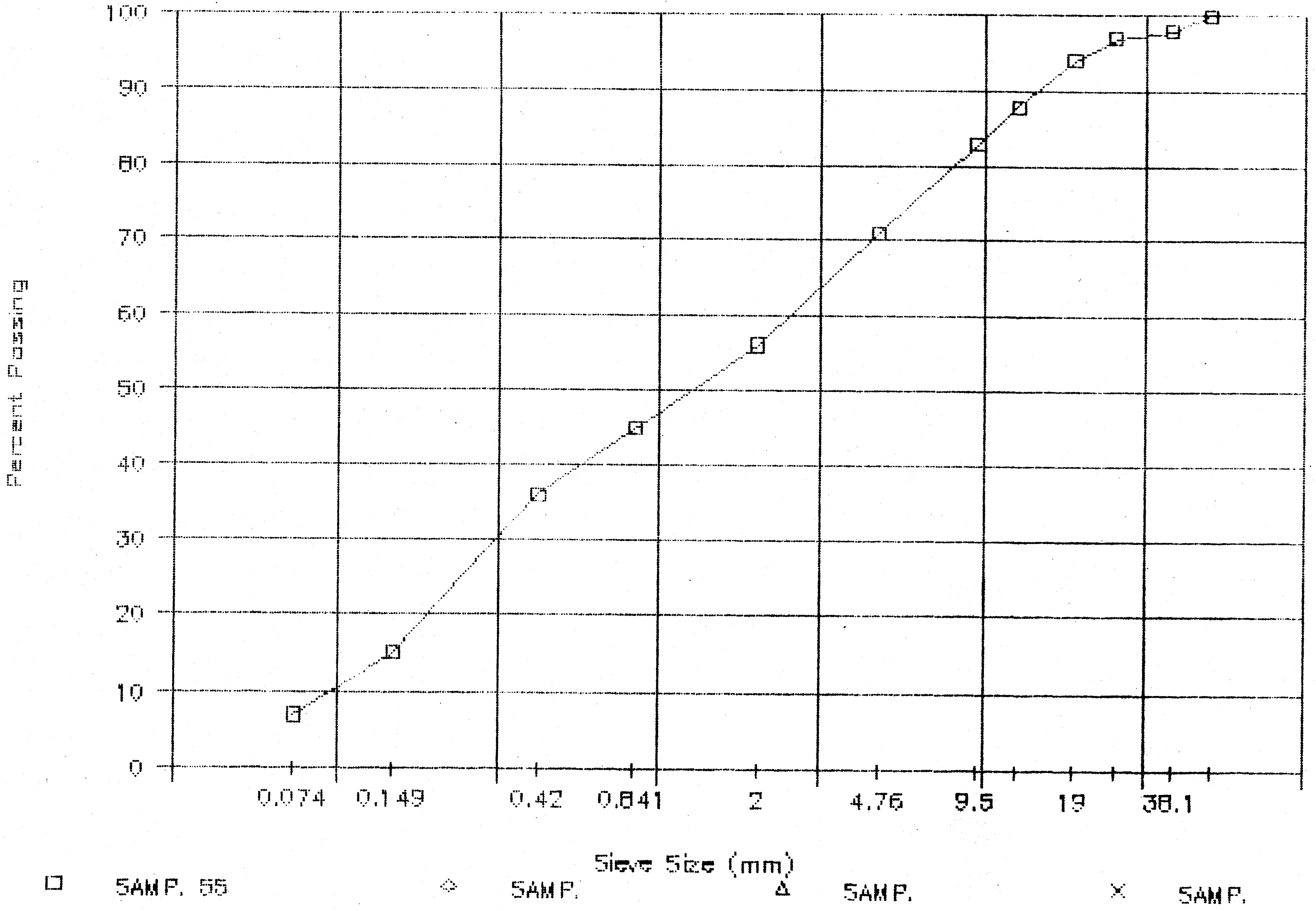
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 29
% SAND: 64
% FINES: 7

CLASSIFICATION:
POORLY GRADED SAND WITH SILT & GRAVEL (SP-SM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030—25



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-26
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: [redacted] CB DATE COMPLETED: 88.10.22

FIELD NO: 56
LAB NO: 2906
DEPTH: 0.9-1.3
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	85
25.4	75
19.0	65
12.7	55
9.5	51
4.76	39
2.38	--
2.00	28
1.19	--
0.841	17
0.595	--
0.42	9
0.297	--
0.177	--
0.149	3
0.074	2

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 61
% SAND: 37
% FINES: 2

CLASSIFICATION:
POORLY GRADED GRAVEL WITH SAND (GP)

FIELD NO: 57
LAB NO: 2907
DEPTH: 2.6-3.0
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	88
38.1	77
25.4	68
19.0	62
12.7	54
9.5	48
4.76	38
2.38	--
2.00	27
1.19	--
0.841	16
0.595	--
0.42	9
0.297	--
0.177	--
0.149	4
0.074	3

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 62
% SAND: 34
% FINES: 3

CLASSIFICATION:
POORLY GRADED GRAVEL WITH SAND (GP)

FIELD NO: 58
LAB NO: 2908
DEPTH: 4.2-4.6
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	94
25.4	79
19.0	71
12.7	62
9.5	55
4.76	44
2.38	--
2.00	33
1.19	--
0.841	23
0.595	--
0.42	15
0.297	--
0.177	--
0.149	7
0.074	4

M.C.(%): --

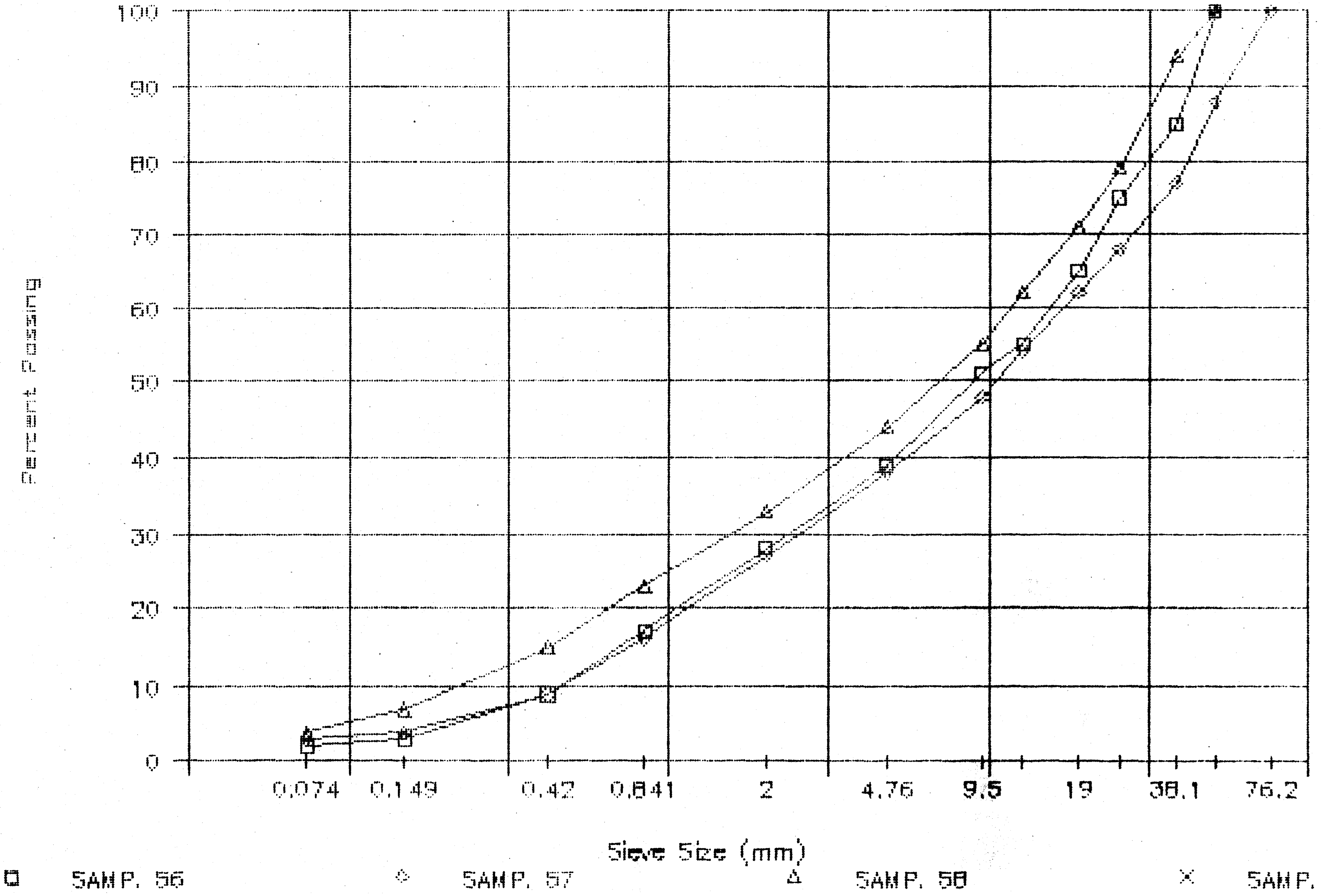
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 56
% SAND: 40
% FINES: 4

CLASSIFICATION:
POORLY GRADED GRAVEL WITH SAND (GP)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis – Hole 030–26



PROJECT NUMBER: 115-G-04
HOLE NUMBER: 030-27
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: [redacted]CB
DATE COMPLETED: 88.10.22

FIELD NO: 59
LAB NO: 2909
DEPTH: 1.7-2.1
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	93
38.1	88
25.4	75
19.0	71
12.7	60
9.5	54
4.76	41
2.38	--
2.00	29
1.19	--
0.841	18
0.595	--
0.42	10
0.297	--
0.177	--
0.149	4
0.074	3

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 59
% SAND: 39
% FINES: 3

CLASSIFICATION:
POORLY GRADED
GRAVEL WITH SAND
(GP)

FIELD NO: 60
LAB NO: 2910
DEPTH: 3.0-3.4
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	91
25.4	82
19.0	77
12.7	65
9.5	59
4.76	44
2.38	--
2.00	29
1.19	--
0.841	17
0.595	--
0.42	10
0.297	--
0.177	--
0.149	4
0.074	3

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 56
% SAND: 41
% FINES: 3

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

FIELD NO: 61
LAB NO: 2911
DEPTH: 4.6-5.0
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	92
38.1	90
25.4	75
19.0	64
12.7	57
9.5	52
4.76	42
2.38	--
2.00	31
1.19	--
0.841	19
0.595	--
0.42	12
0.297	--
0.177	--
0.149	5
0.074	3

M.C.(%): --

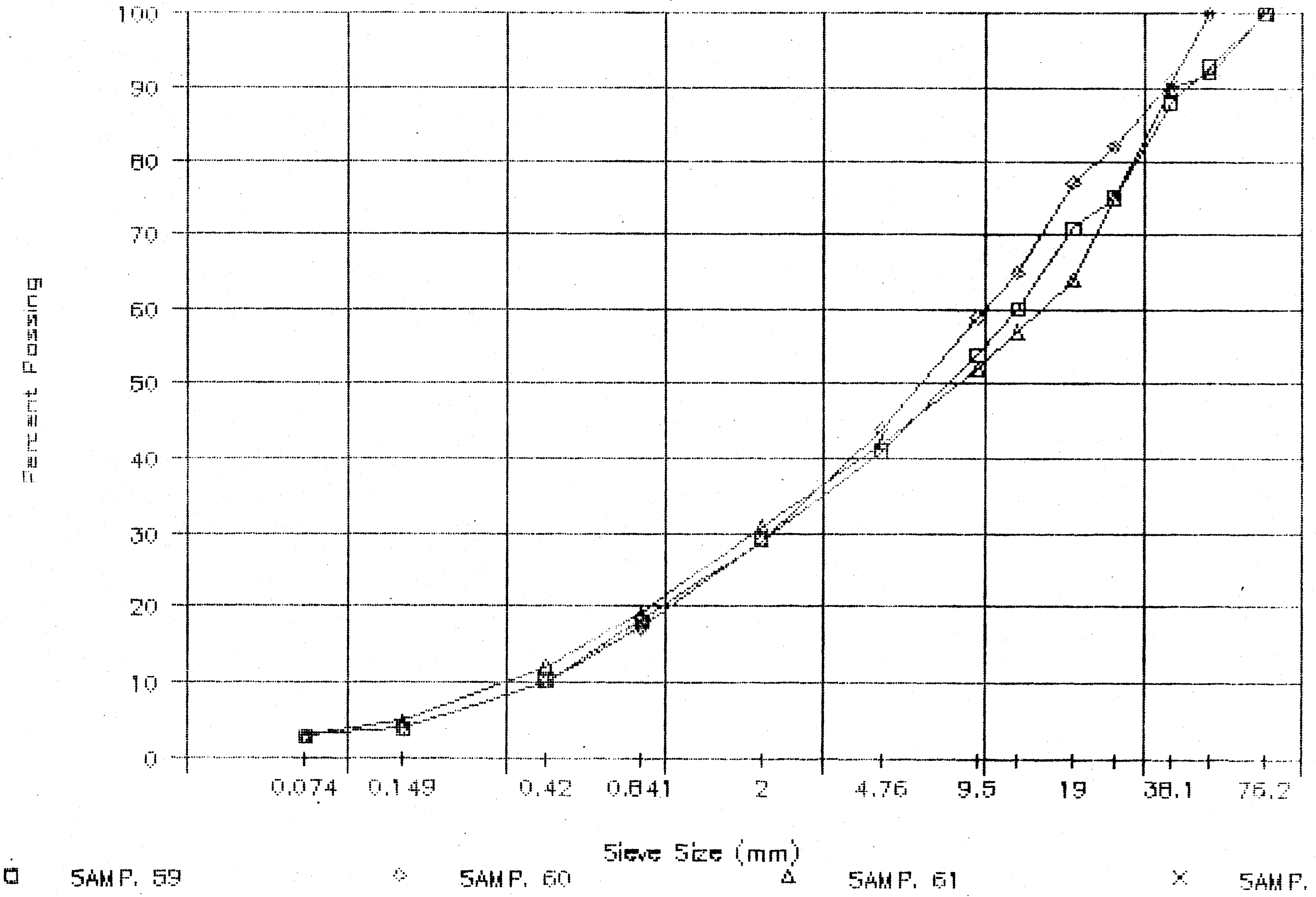
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 58
% SAND: 39
% FINES: 3

CLASSIFICATION:
POORLY GRADED
GRAVEL WITH SAND
(GP)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030-27



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-28
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: [redacted] CB DATE COMPLETED: 88.10.22

FIELD NO: 62
LAB NO: 2912
DEPTH: 1.6-2.0
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	90
38.1	87
25.4	83
19.0	81
12.7	75
9.5	70
4.76	62
2.38	--
2.00	52
1.19	--
0.841	43
0.595	--
0.42	36
0.297	--
0.177	--
0.149	22
0.074	13

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 38
% SAND: 48
% FINES: 13

CLASSIFICATION:
SILTY SAND WITH GRAVEL (SM)

FIELD NO: 63
LAB NO: 2913
DEPTH: 3.2-3.6
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	97
25.4	90
19.0	84
12.7	75
9.5	70
4.76	61
2.38	--
2.00	52
1.19	--
0.841	45
0.595	--
0.42	40
0.297	--
0.177	--
0.149	29
0.074	18

M.C.(%): --

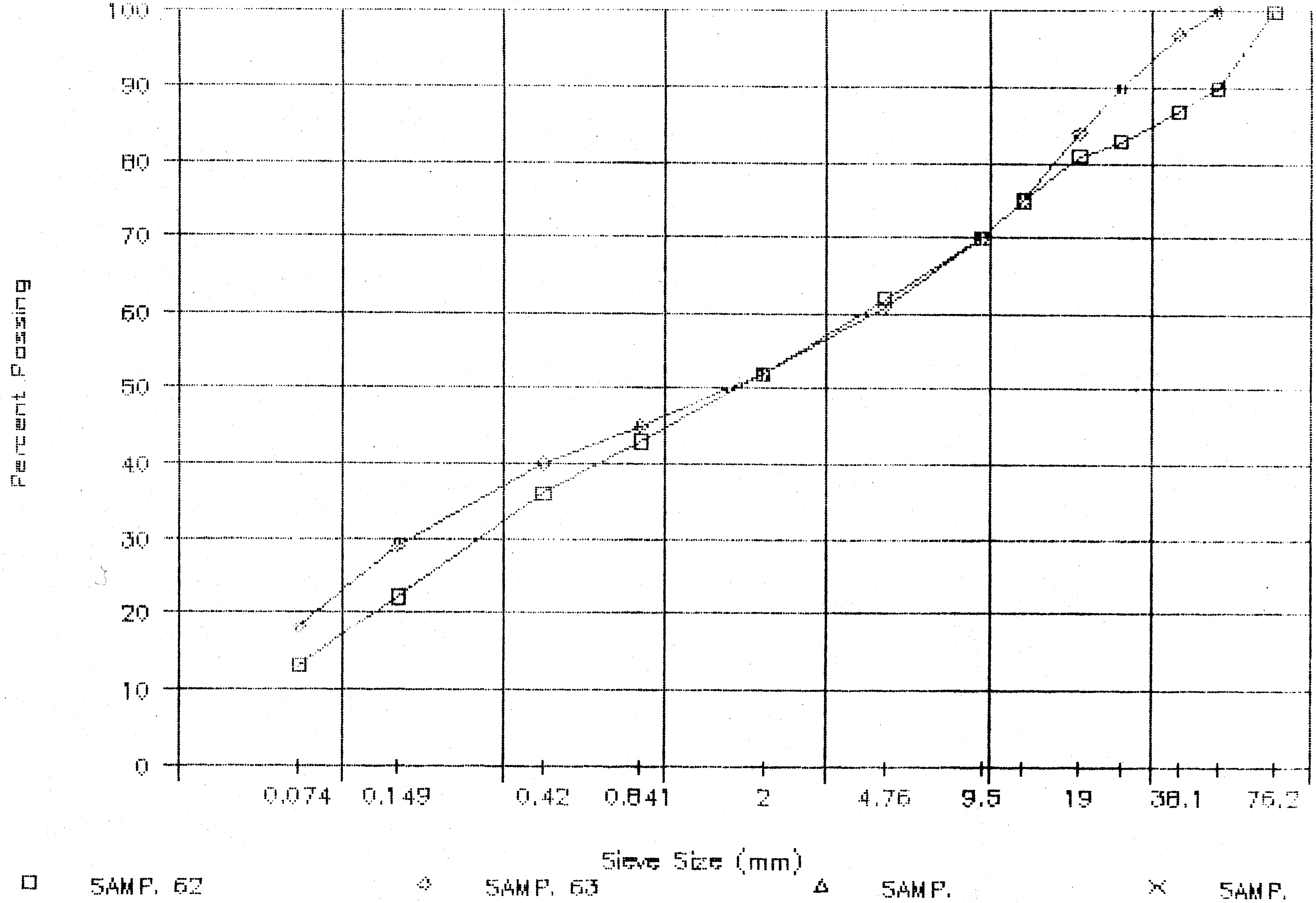
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 39
% SAND: 43
% FINES: 18

CLASSIFICATION:
SILTY SAND WITH GRAVEL (SM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030-28



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-29
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: [illegible]CB DATE COMPLETED: 88.10.22

FIELD NO: 64
LAB NO: 2914
DEPTH: 2.0-2.4
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	76
38.1	68
25.4	59
19.0	51
12.7	44
9.5	39
4.76	32
2.38	--
2.00	24
1.19	--
0.841	16
0.595	--
0.42	10
0.297	--
0.177	--
0.149	4
0.074	2

M.C.(%): --

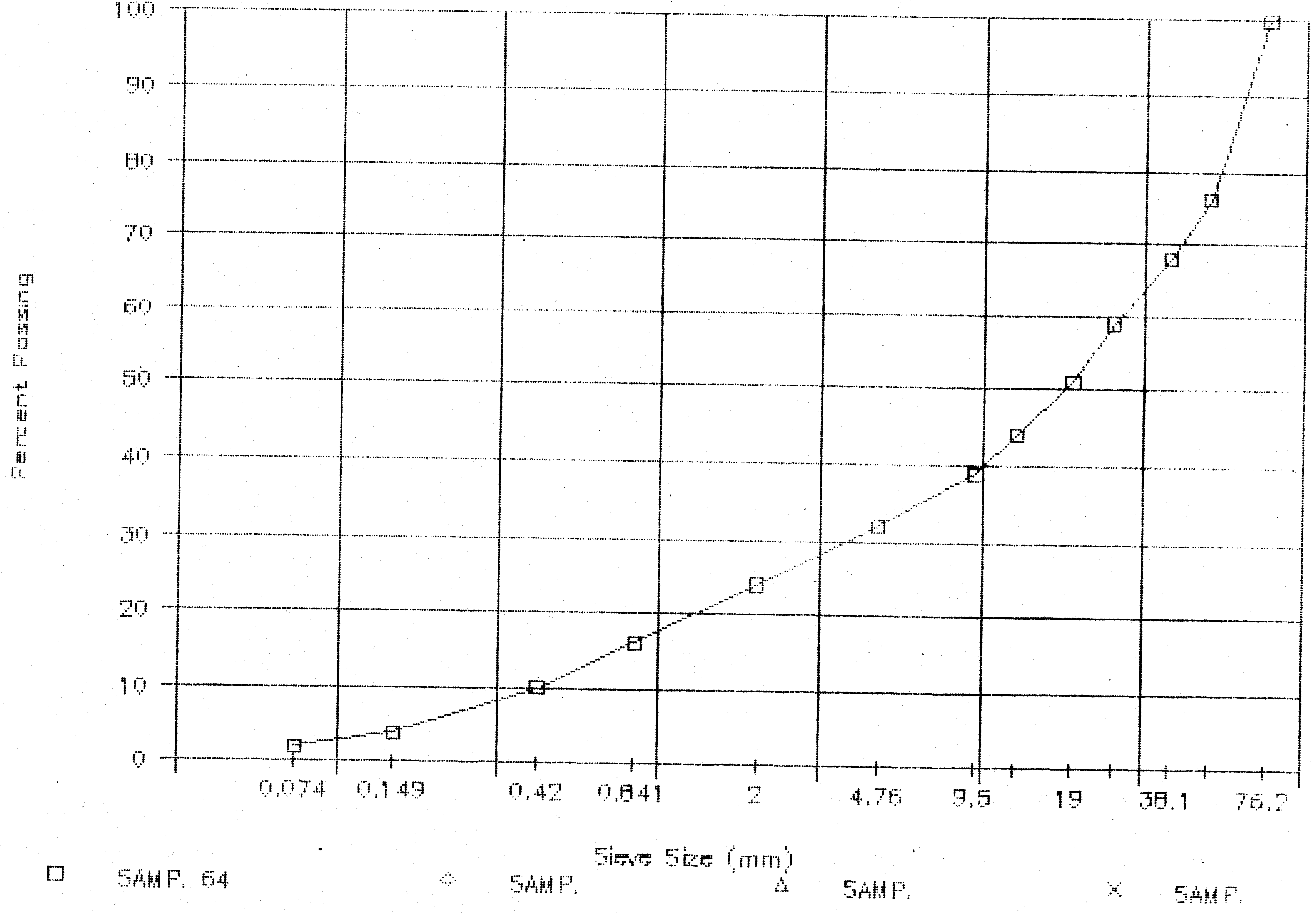
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 68
% SAND: 29
% FINES: 2

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis – Hole 030–29



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-30
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: CB DATE COMPLETED: 88.10.22

FIELD NO: 65
LAB NO: 2915
DEPTH: 2.6-3.0
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	88
38.1	88
25.4	81
19.0	75
12.7	65
9.5	59
4.76	49
2.38	--
2.00	38
1.19	--
0.841	28
0.595	--
0.42	19
0.297	--
0.177	--
0.149	7
0.074	4

M.C.(%): --

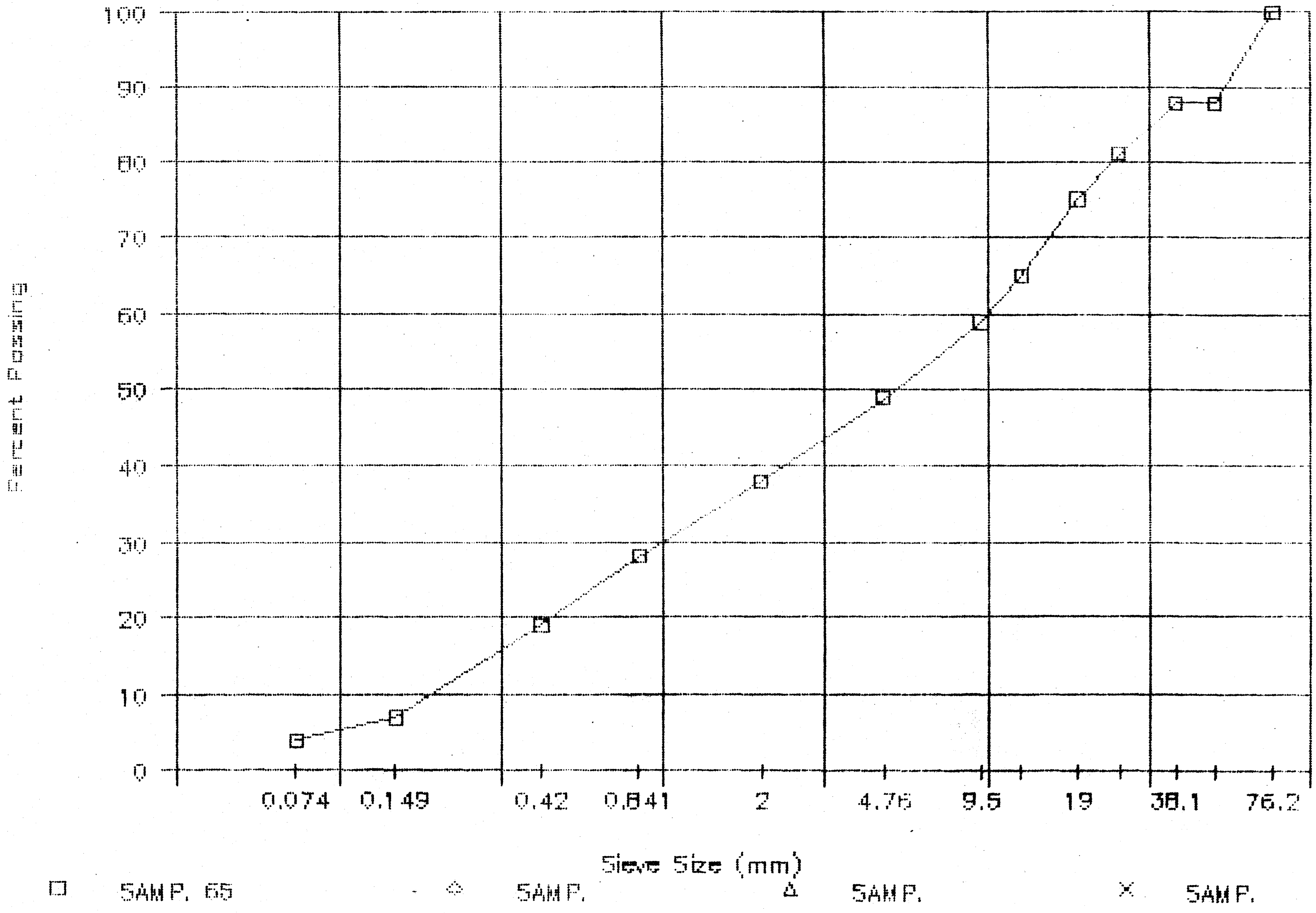
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 51
% SAND: 44
% FINES: 4

CLASSIFICATION:
POORLY GRADED GRAVEL WITH SAND (GP)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030-30



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-31
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: CB DATE COMPLETED: 88.10.22

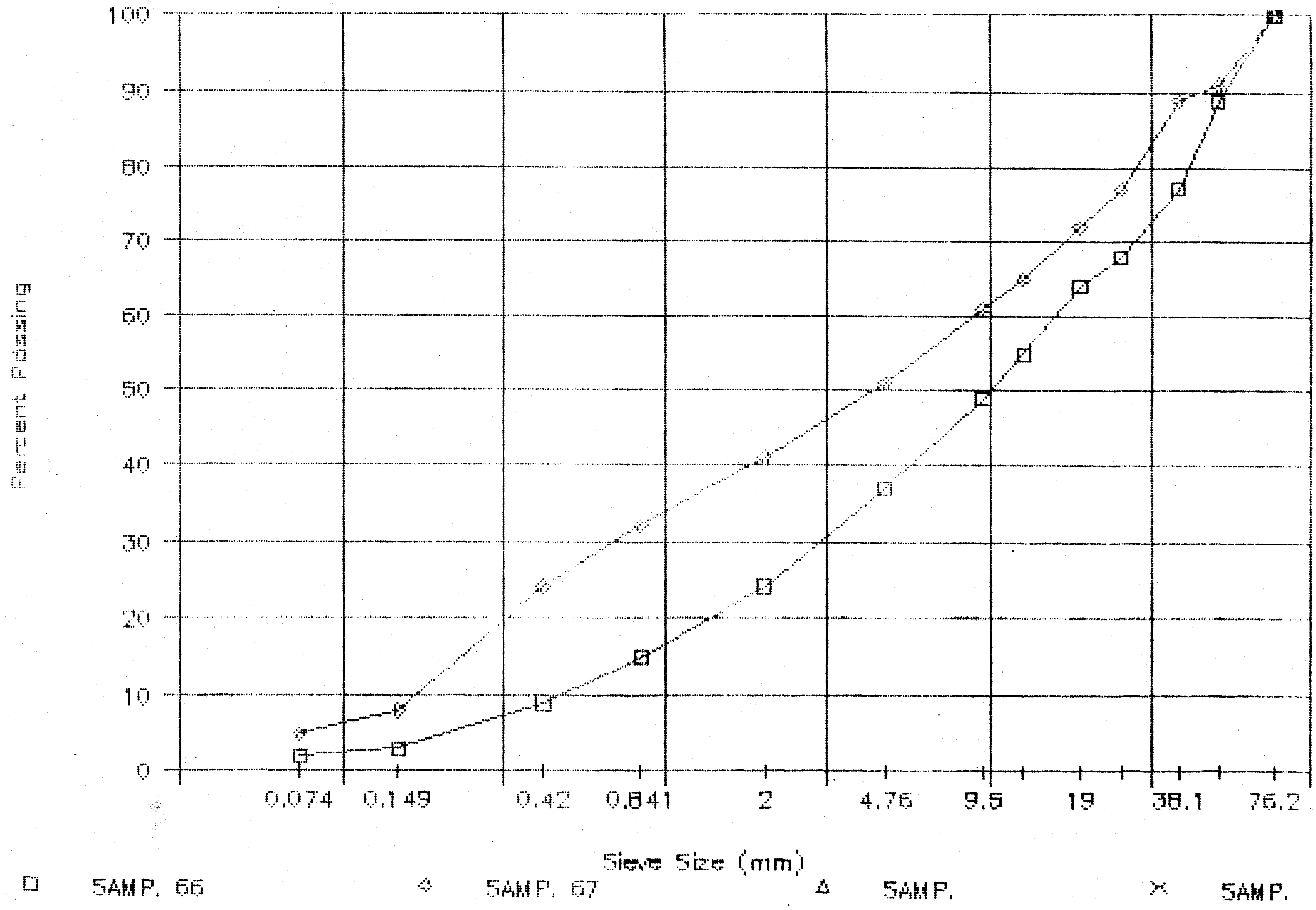
FIELD NO:	66	FIELD NO:	67
LAB NO:	2916	LAB NO:	2917
DEPTH:	1.2-1.6	DEPTH:	2.6-3.0
TYPE:	BULK	TYPE:	BULK

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	--
76.2	100	76.2	100
50.8	89	50.8	91
38.1	77	38.1	89
25.4	68	25.4	77
19.0	64	19.0	72
12.7	55	12.7	65
9.5	49	9.5	61
4.76	37	4.76	51
2.38	--	2.38	--
2.00	24	2.00	41
1.19	--	1.19	--
0.841	15	0.841	32
0.595	--	0.595	--
0.42	9	0.42	24
0.297	--	0.297	--
0.177	--	0.177	--
0.149	3	0.149	8
0.074	2	0.074	5

M.C.(%):	--	M.C.(%):	--
LIMITS		LIMITS	
LIQUID:	--	LIQUID:	--
PLASTIC:	--	PLASTIC:	--
P.I.:	N.P.	P.I.:	N.P.
% GRAVEL:	63	% GRAVEL:	49
% SAND:	35	% SAND:	46
% FINES:	2	% FINES:	5
CLASSIFICATION: WELL-GRADED GRAVEL WITH SAND (GW)		CLASSIFICATION: POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030-31



PROJECT NUMBER: 115-G-04
HOLE NUMBER: 030-32
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: CB
DATE COMPLETED: 88.10.23

FIELD NO: 68
LAB NO: 2918
DEPTH: 2.4-2.8
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	88
25.4	73
19.0	67
12.7	59
9.5	55
4.76	46
2.38	--
2.00	35
1.19	--
0.841	26
0.595	--
0.42	19
0.297	--
0.177	--
0.149	11
0.074	8

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 54
% SAND: 38
% FINES: 8

CLASSIFICATION:
POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)

FIELD NO: 69
LAB NO: 2919
DEPTH: 3.8-4.2
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	94
25.4	80
19.0	77
12.7	66
9.5	60
4.76	49
2.38	--
2.00	37
1.19	--
0.841	27
0.595	--
0.42	19
0.297	--
0.177	--
0.149	10
0.074	6

M.C.(%): --

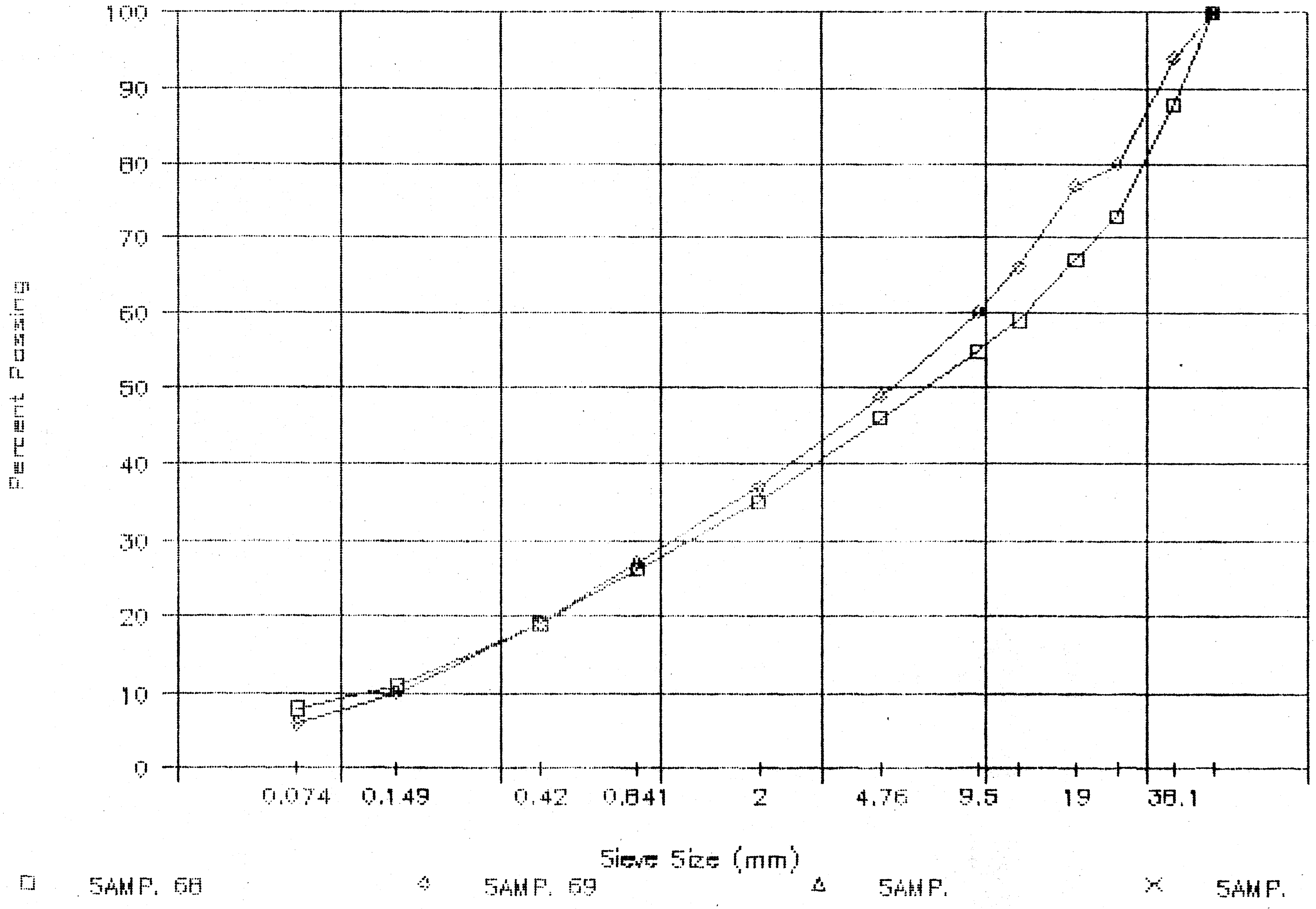
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 51
% SAND: 43
% FINES: 6

CLASSIFICATION:
POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030-32



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-33
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: CB DATE COMPLETED: 88.10.23

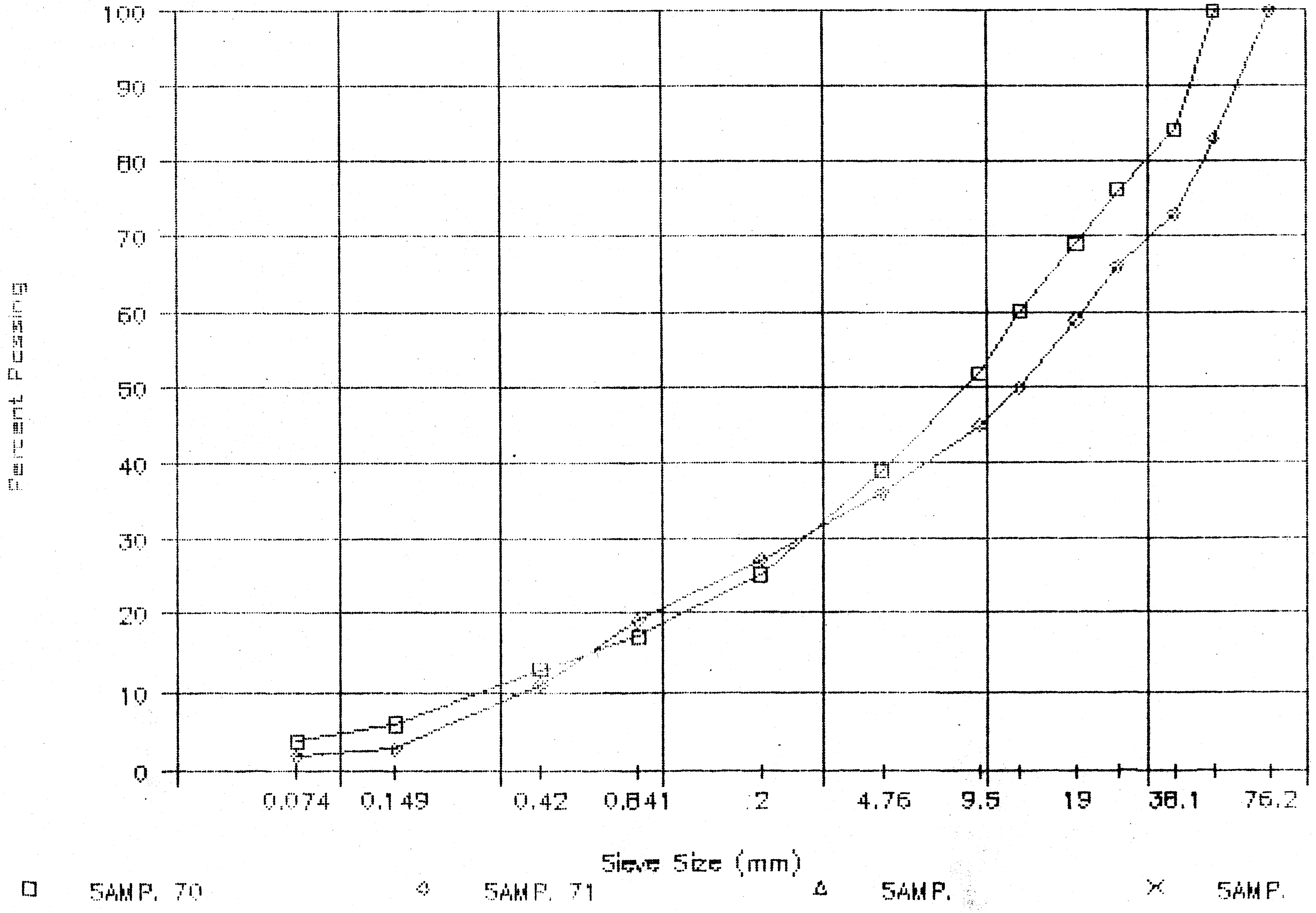
FIELD NO: 70	FIELD NO: 71
LAB NO: 2920	LAB NO: 2921
DEPTH: 0.8-1.2	DEPTH: 2.2-2.6
TYPE: BULK	TYPE: BULK

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	--
76.2	--	76.2	100
50.8	100	50.8	83
38.1	84	38.1	73
25.4	76	25.4	66
19.0	69	19.0	59
12.7	60	12.7	50
9.5	52	9.5	45
4.76	39	4.76	36
2.38	--	2.38	--
2.00	25	2.00	27
1.19	--	1.19	--
0.841	17	0.841	19
0.595	--	0.595	--
0.42	13	0.42	11
0.297	--	0.297	--
0.177	--	0.177	--
0.149	6	0.149	3
0.074	4	0.074	2

M.C.(%): --	M.C.(%): --
LIMITS	LIMITS
LIQUID: --	LIQUID: --
PLASTIC: --	PLASTIC: --
P.I.: N.P.	P.I.: N.P.
% GRAVEL: 61	% GRAVEL: 64
% SAND: 35	% SAND: 34
% FINES: 4	% FINES: 2
CLASSIFICATION: WELL-GRADED GRAVEL WITH SAND (GW)	CLASSIFICATION: POORLY GRADED GRAVEL WITH SAND (GP)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030-33



PROJECT NUMBER: 115-G-04
HOLE NUMBER: 030-34
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: CB
DATE COMPLETED: 88.10.23

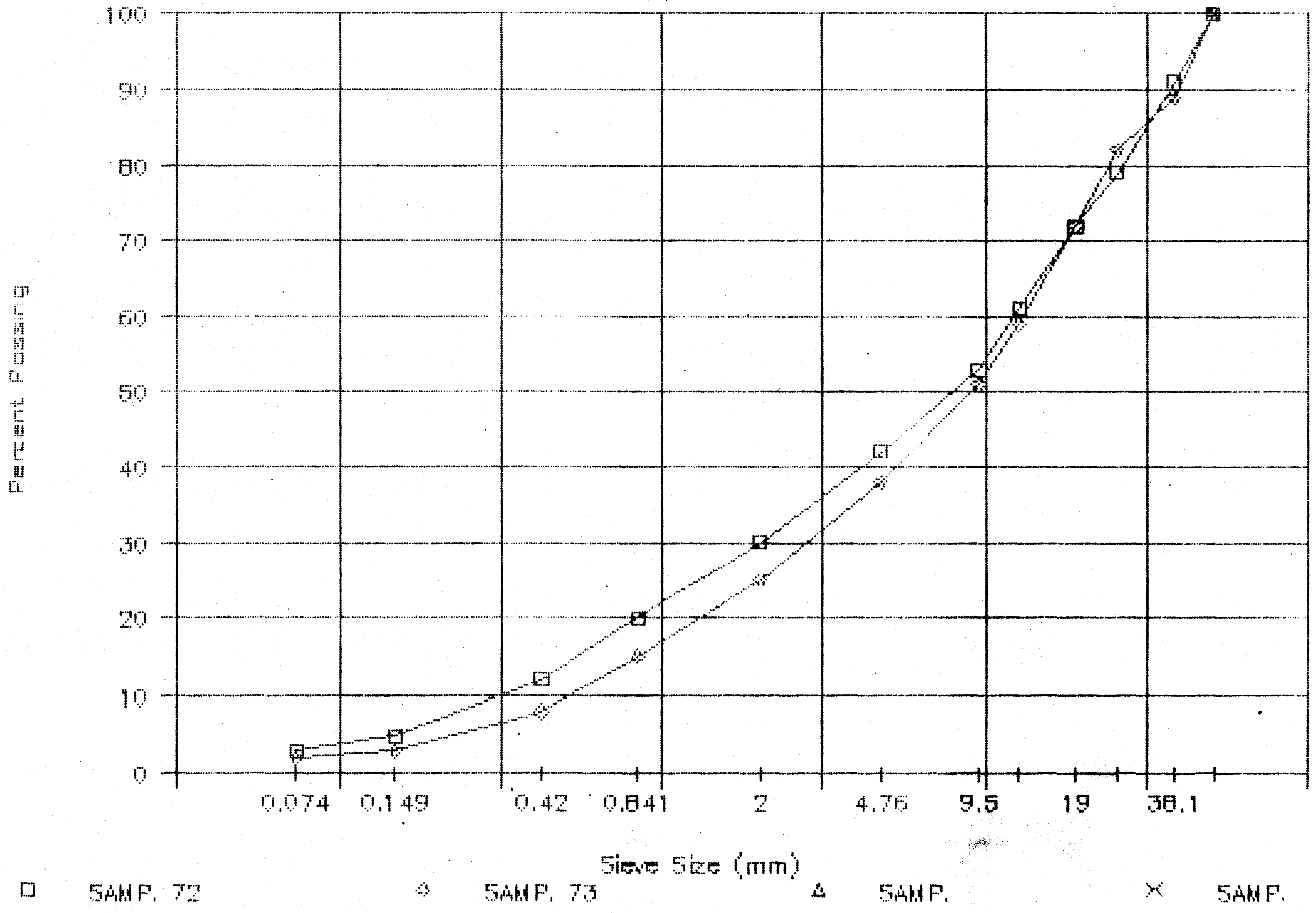
FIELD NO:	72	FIELD NO:	73
LAB NO:	2922	LAB NO:	2923
DEPTH:	1.6-2.0	DEPTH:	3.2-3.6
TYPE:	BULK	TYPE:	BULK

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	--
76.2	--	76.2	--
50.8	100	50.8	100
38.1	91	38.1	89
25.4	79	25.4	82
19.0	72	19.0	72
12.7	61	12.7	59
9.5	53	9.5	51
4.76	42	4.76	38
2.38	--	2.38	--
2.00	30	2.00	25
1.19	--	1.19	--
0.841	20	0.841	15
0.595	--	0.595	--
0.42	12	0.42	8
0.297	--	0.297	--
0.177	--	0.177	--
0.149	5	0.149	3
0.074	3	0.074	2

M.C.(%):	--	M.C.(%):	--
LIMITS		LIMITS	
LIQUID:	--	LIQUID:	--
PLASTIC:	--	PLASTIC:	--
P.I.:	N.P.	P.I.:	N.P.
% GRAVEL:	58	% GRAVEL:	62
% SAND:	38	% SAND:	35
% FINES:	3	% FINES:	2
CLASSIFICATION: WELL-GRADED GRAVEL WITH SAND (GW)		CLASSIFICATION: WELL-GRADED GRAVEL WITH SAND (GW)	

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030-34



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-35
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: CB DATE COMPLETED: 88.10.23

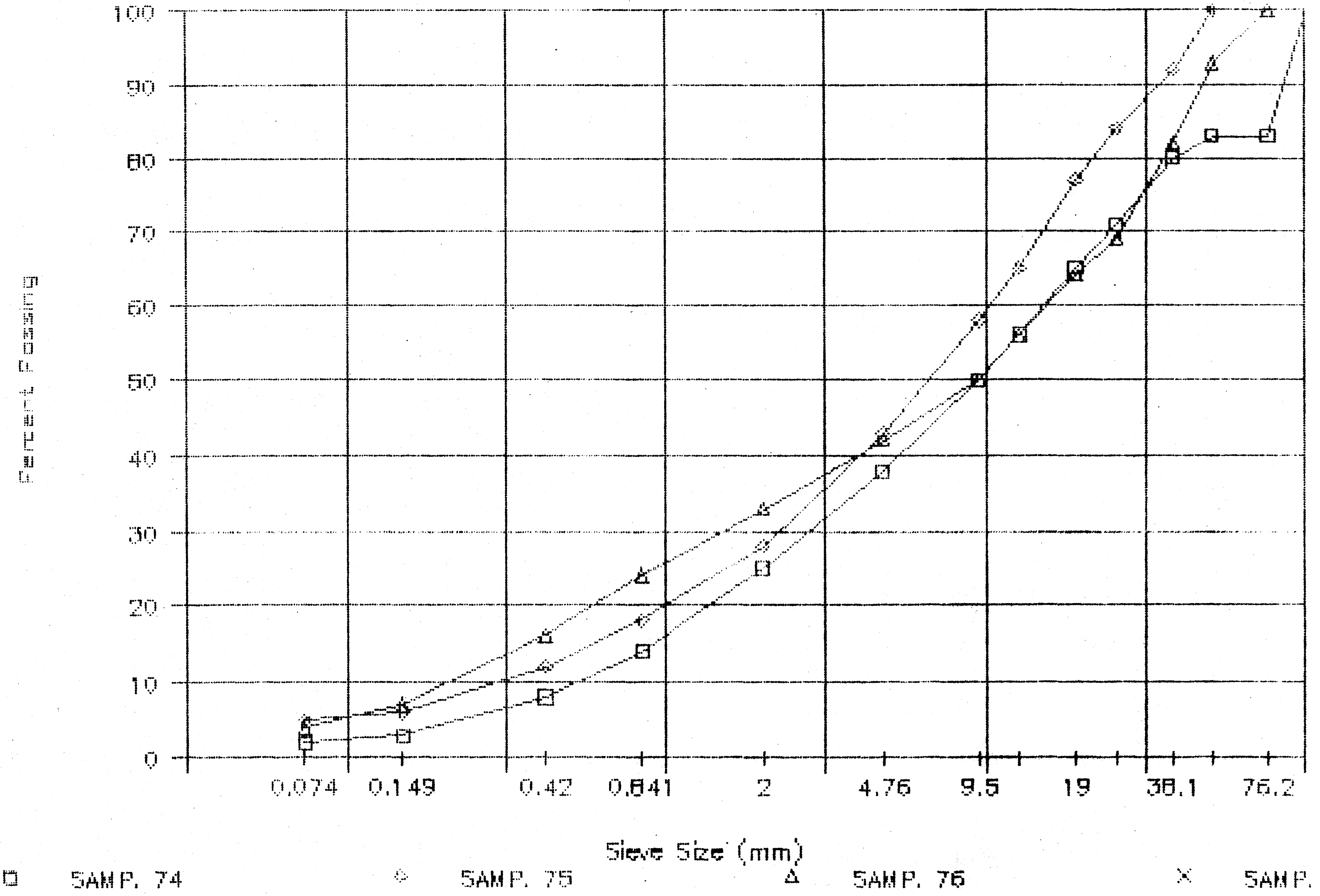
FIELD NO:	74	FIELD NO:	75	FIELD NO:	76
LAB NO:	2924	LAB NO:	2925	LAB NO:	2926
DEPTH:	1.6-2.0	DEPTH:	3.2-3.6	DEPTH:	4.2-4.6
TYPE:	BULK	TYPE:	BULK	TYPE:	BULK

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	100	101.6	--	101.6	--
76.2	83	76.2	--	76.2	100
50.8	83	50.8	100	50.8	93
38.1	80	38.1	92	38.1	82
25.4	71	25.4	84	25.4	69
19.0	65	19.0	77	19.0	64
12.7	56	12.7	65	12.7	56
9.5	50	9.5	58	9.5	50
4.76	38	4.76	43	4.76	42
2.38	--	2.38	--	2.38	--
2.00	25	2.00	28	2.00	33
1.19	--	1.19	--	1.19	--
0.841	14	0.841	18	0.841	24
0.595	--	0.595	--	0.595	--
0.42	8	0.42	12	0.42	16
0.297	--	0.297	--	0.297	--
0.177	--	0.177	--	0.177	--
0.149	3	0.149	6	0.149	7
0.074	2	0.074	5	0.074	4

M.C.(%):	--	M.C.(%):	--	M.C.(%):	--
LIMITS		LIMITS		LIMITS	
LIQUID:	--	LIQUID:	--	LIQUID:	--
PLASTIC:	--	PLASTIC:	--	PLASTIC:	--
P.I.:	N.P.	P.I.:	N.P.	P.I.:	N.P.
% GRAVEL:	62	% GRAVEL:	57	% GRAVEL:	58
% SAND:	36	% SAND:	38	% SAND:	38
% FINES:	2	% FINES:	5	% FINES:	4
CLASSIFICATION: POORLY GRADED GRAVEL WITH SAND (GP)		CLASSIFICATION: WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)		CLASSIFICATION: POORLY GRADED GRAVEL WITH SAND (GP)	

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030–35



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-36
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: CB DATE COMPLETED: 88.10.23

FIELD NO: 77
LAB NO: 2927
DEPTH: 2.6-3.0
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	93
25.4	92
19.0	88
12.7	80
9.5	76
4.76	63
2.38	--
2.00	47
1.19	--
0.841	33
0.595	--
0.42	20
0.297	--
0.177	--
0.149	7
0.074	4

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 37
% SAND: 59
% FINES: 4

CLASSIFICATION:
POORLY GRADED SAND WITH GRAVEL (SP)

FIELD NO: 78
LAB NO: 2928
DEPTH: 4.0-4.4
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	94
25.4	89
19.0	80
12.7	69
9.5	62
4.76	49
2.38	--
2.00	36
1.19	--
0.841	25
0.595	--
0.42	17
0.297	--
0.177	--
0.149	7
0.074	4

M.C.(%): --

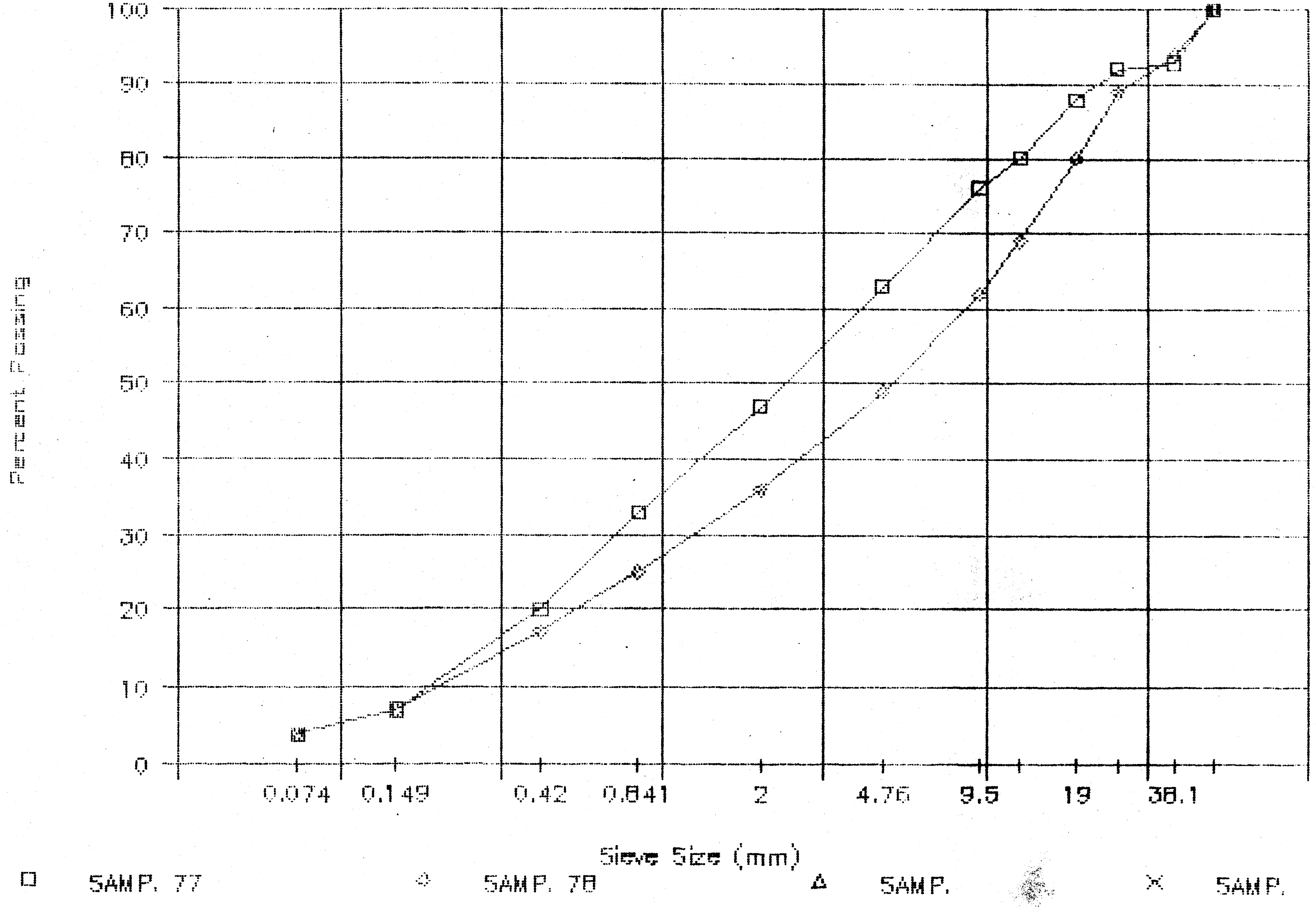
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 51
% SAND: 45
% FINES: 4

CLASSIFICATION:
POORLY GRADED GRAVEL WITH SAND (GP)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030–36



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-37
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: CB DATE COMPLETED: 88.10.23

FIELD NO: 79
LAB NO: 2929
DEPTH: 1.4-1.8
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	87
25.4	79
19.0	75
12.7	66
9.5	59
4.76	47
2.38	--
2.00	35
1.19	--
0.841	23
0.595	--
0.42	14
0.297	--
0.177	--
0.149	6
0.074	4

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 53
% SAND: 44
% FINES: 4

CLASSIFICATION:
POORLY GRADED GRAVEL WITH SAND (GP)

FIELD NO: **80**
LAB NO: 2930
DEPTH: 3.0-3.4
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	85
25.4	77
19.0	71
12.7	59
9.5	54
4.76	42
2.38	--
2.00	30
1.19	--
0.841	18
0.595	--
0.42	11
0.297	--
0.177	--
0.149	5
0.074	3

M.C.(%): --

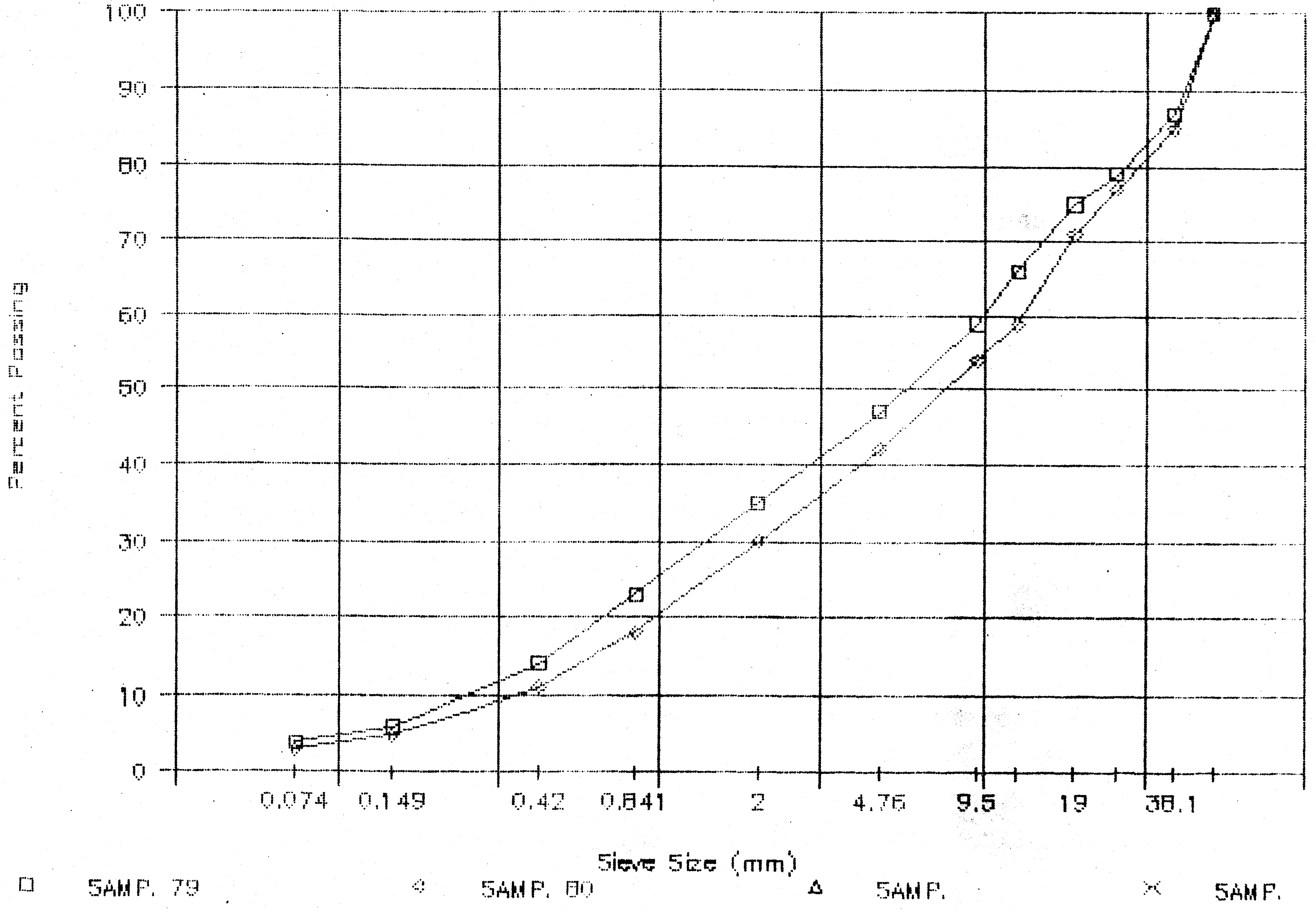
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 58
% SAND: 39
% FINES: 3

CLASSIFICATION:
POORLY GRADED GRAVEL WITH SAND (GP)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis – Hole 030–37



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-38
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION. SEE PLAN
LOGGED BY: CB DATE COMPLETED: 88.10.23

FIELD NO: 81
LAB NO: 2931
DEPTH: 1.4-1.8
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	95
38.1	69
25.4	52
19.0	43
12.7	36
9.5	31
4.76	24
2.38	--
2.00	17
1.19	--
0.841	12
0.595	--
0.42	7
0.297	--
0.177	--
0.149	4
0.074	3

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 76
% SAND: 21
% FINES: 3

CLASSIFICATION:
POORLY GRADED GRAVEL WITH SAND (GP)

FIELD NO: 82
LAB NO: 2932
DEPTH: 2.4-2.8
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	89
76.2	67
50.8	64
38.1	56
25.4	52
19.0	47
12.7	44
9.5	35
4.76	29
2.38	--
2.00	23
1.19	--
0.841	15
0.595	--
0.42	5
0.297	--
0.177	--
0.149	3
0.074	3

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 71
% SAND: 26
% FINES: 3

CLASSIFICATION:
WELL-GRADED GRAVEL WITH SAND (GW)

FIELD NO: 83
LAB NO: 2933
DEPTH: 4.4-4.8
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	94
38.1	82
25.4	74
19.0	67
12.7	58
9.5	54
4.76	44
2.38	--
2.00	35
1.19	--
0.841	27
0.595	--
0.42	21
0.297	--
0.177	--
0.149	11
0.074	8

M.C.(%): --

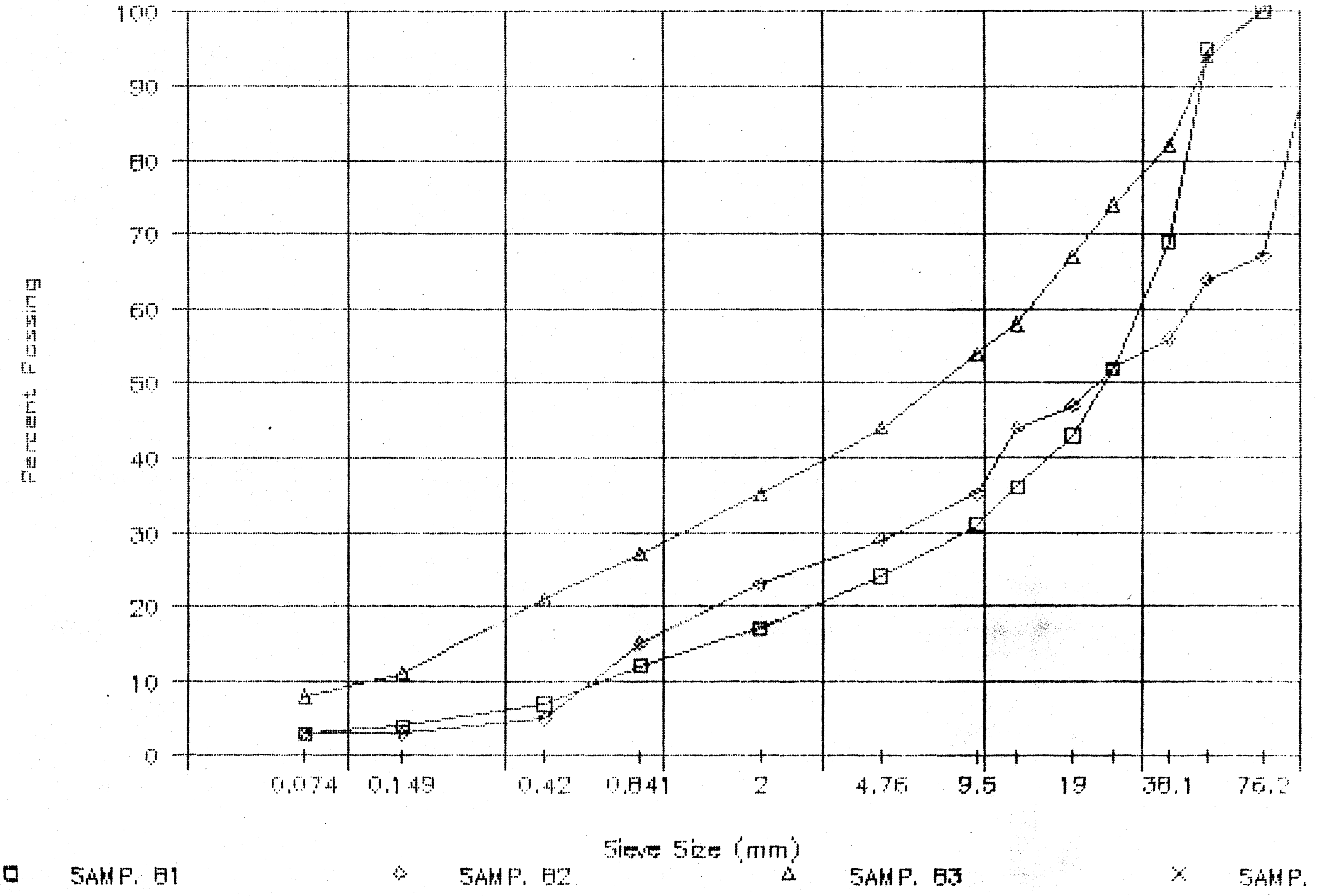
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 56
% SAND: 37
% FINES: 8

CLASSIFICATION:
POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030-38



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-39
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: CB DATE COMPLETED: 88.10.23

FIELD NO: 84
LAB NO: 2934
DEPTH: 1.6-2.0
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	96
38.1	76
25.4	68
19.0	62
12.7	55
9.5	50
4.76	42
2.38	--
2.00	31
1.19	--
0.841	20
0.595	--
0.42	10
0.297	--
0.177	--
0.149	3
0.074	2

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 58
% SAND: 40
% FINES: 2

CLASSIFICATION:
POORLY GRADED GRAVEL WITH SAND (GP)

FIELD NO: 85
LAB NO: 2935
DEPTH: 3.4-3.8
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	86
25.4	72
19.0	68
12.7	59
9.5	54
4.76	44
2.38	--
2.00	34
1.19	--
0.841	25
0.595	--
0.42	17
0.297	--
0.177	--
0.149	8
0.074	5

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 56
% SAND: 39
% FINES: 5

CLASSIFICATION:
POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)

FIELD NO: 86
LAB NO: 2936
DEPTH: 4.8-5.2
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	96
25.4	86
19.0	79
12.7	68
9.5	61
4.76	50
2.38	--
2.00	38
1.19	--
0.841	27
0.595	--
0.42	19
0.297	--
0.177	--
0.149	9
0.074	6

M.C.(%): --

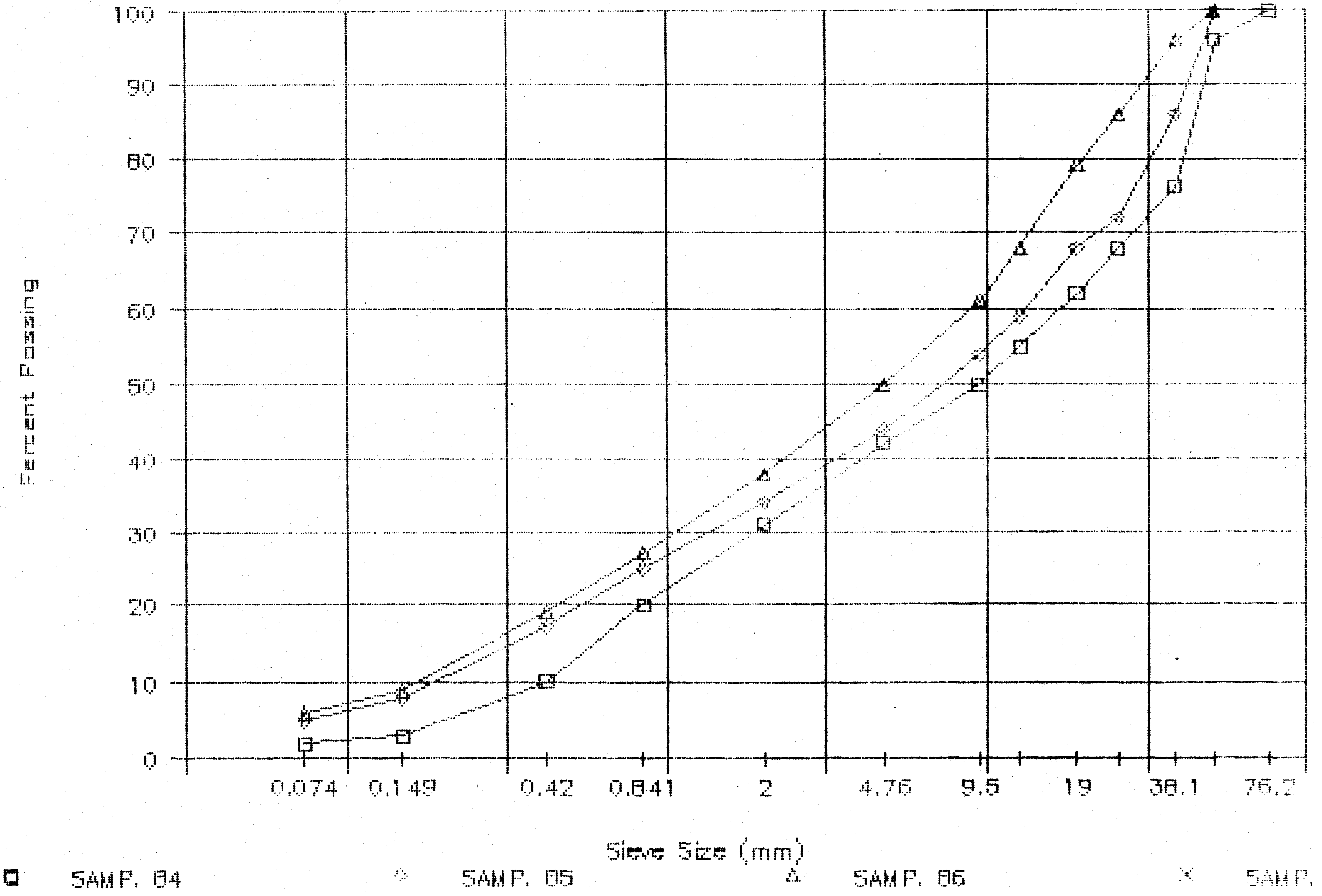
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 50
% SAND: 44
% FINES: 6

CLASSIFICATION:
POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030-37



Pit 115 G-04
Km 1750 LHS Alaska Highway

1988
Crush Sample Results

PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-01C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.19

FIELD NO: 1
LAB NO: 2853
DEPTH: 1.1-1.5
TYPE: BULK
CC = 82%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	88
9.5	72
4.76	48
2.38	--
2.00	31
1.19	--
0.841	21
0.595	--
0.42	15
0.297	--
0.177	--
0.149	7
0.074	4

M.C.(%): --

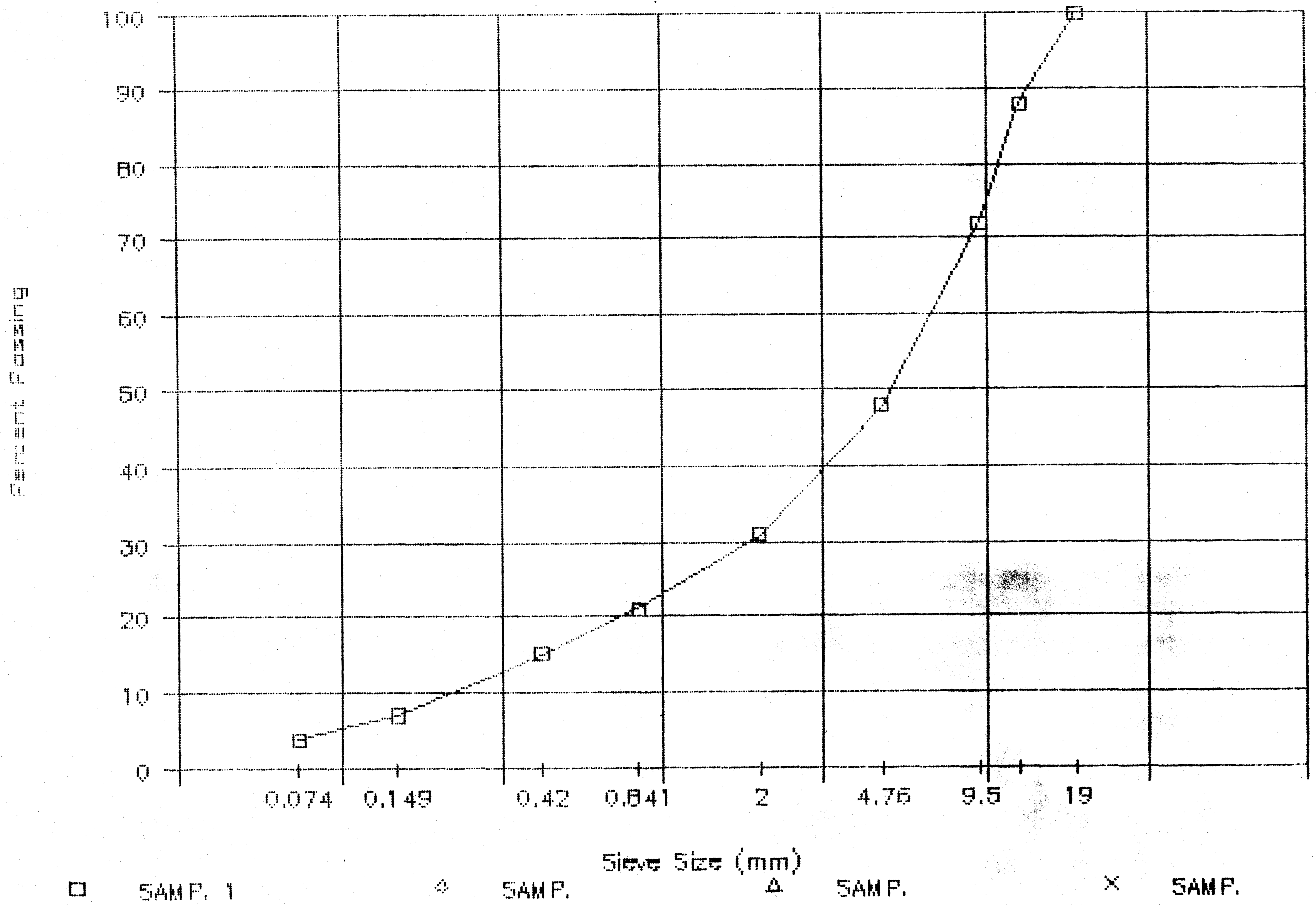
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 52
% SAND: 43
% FINES: 4

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-01C



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-02C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.19

FIELD NO: 2
LAB NO: 2854
DEPTH: 1.2-1.9
TYPE: BULK
CC = 79%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	89
9.5	74
4.76	45
2.38	--
2.00	30
1.19	--
0.841	19
0.595	--
0.42	12
0.297	--
0.177	--
0.149	5
0.074	3

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 55
% SAND: 42
% FINES: 3

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

FIELD NO: 3
LAB NO: 2855
DEPTH: 3.0-3.4
TYPE: BULK
CC = 87%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	93
9.5	76
4.76	47
2.38	--
2.00	31
1.19	--
0.841	19
0.595	--
0.42	12
0.297	--
0.177	--
0.149	6
0.074	4

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 53
% SAND: 43
% FINES: 4

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

FIELD NO: 4
LAB NO: 2856
DEPTH: 5.0-5.3
TYPE: BULK
CC = 87%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	89
9.5	73
4.76	46
2.38	--
2.00	29
1.19	--
0.841	19
0.595	--
0.42	13
0.297	--
0.177	--
0.149	6
0.074	5

M.C.(%): --

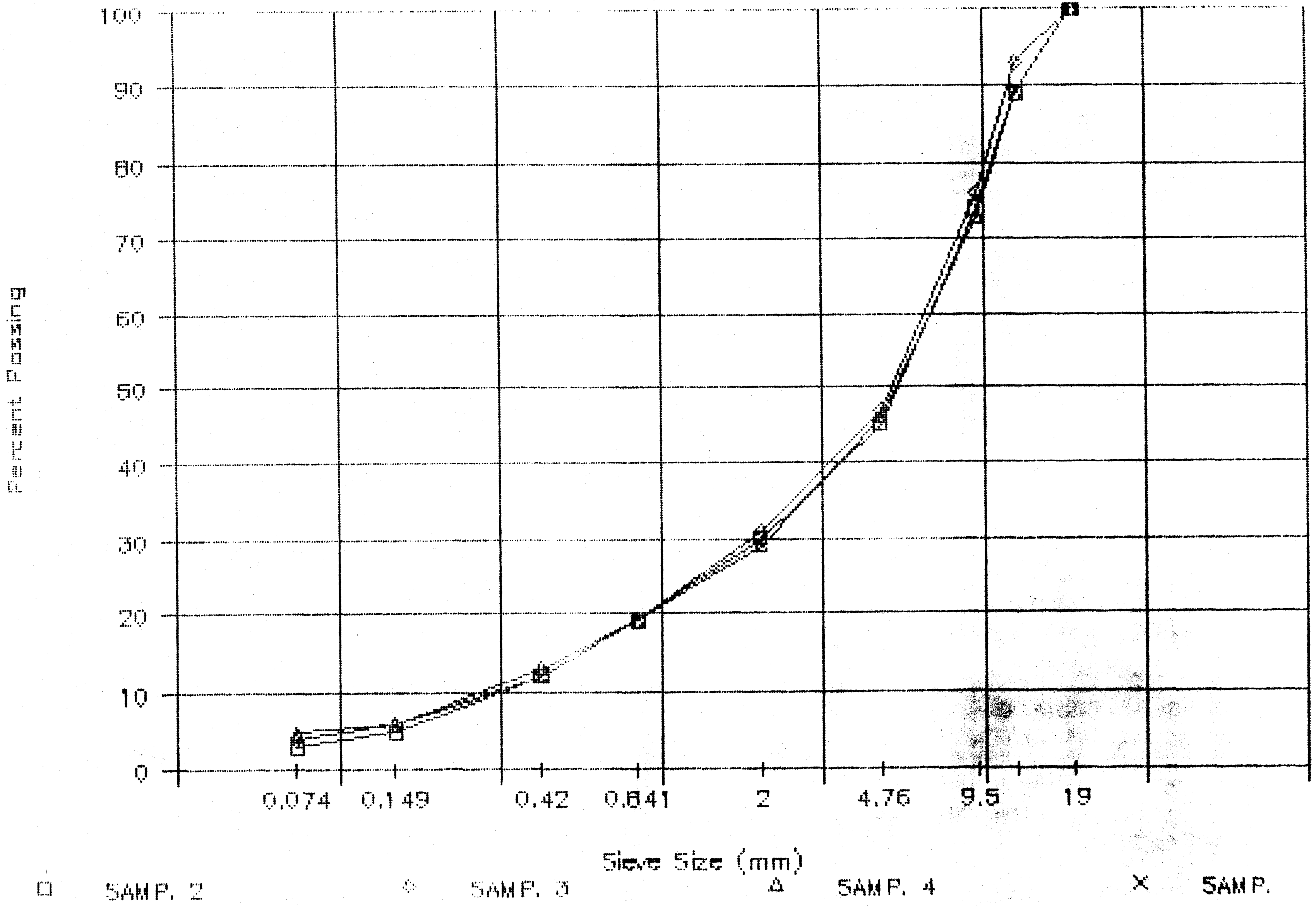
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 54
% SAND: 41
% FINES: 5

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SILT
& SAND (GW-GM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029—020



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-03C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.19

FIELD NO: 5
LAB NO: 2857
DEPTH: 1.2-1.6
TYPE: BULK
CC = 83%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	94
9.5	75
4.76	48
2.38	--
2.00	31
1.19	--
0.841	18
0.595	--
0.42	10
0.297	--
0.177	--
0.149	5
0.074	4

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 52
% SAND: 44
% FINES: 4

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

FIELD NO: 6
LAB NO: 2858
DEPTH: 2.8-3.3
TYPE: BULK
CC = 87%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	90
9.5	75
4.76	44
2.38	--
2.00	27
1.19	--
0.841	15
0.595	--
0.42	10
0.297	--
0.177	--
0.149	5
0.074	4

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 56
% SAND: 40
% FINES: 4

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

FIELD NO: 7
LAB NO: 2859
DEPTH: 4.3-4.7
TYPE: BULK
CC = 82%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	92
9.5	76
4.76	47
2.38	--
2.00	30
1.19	--
0.841	17
0.595	--
0.42	11
0.297	--
0.177	--
0.149	6
0.074	4

M.C.(%): --

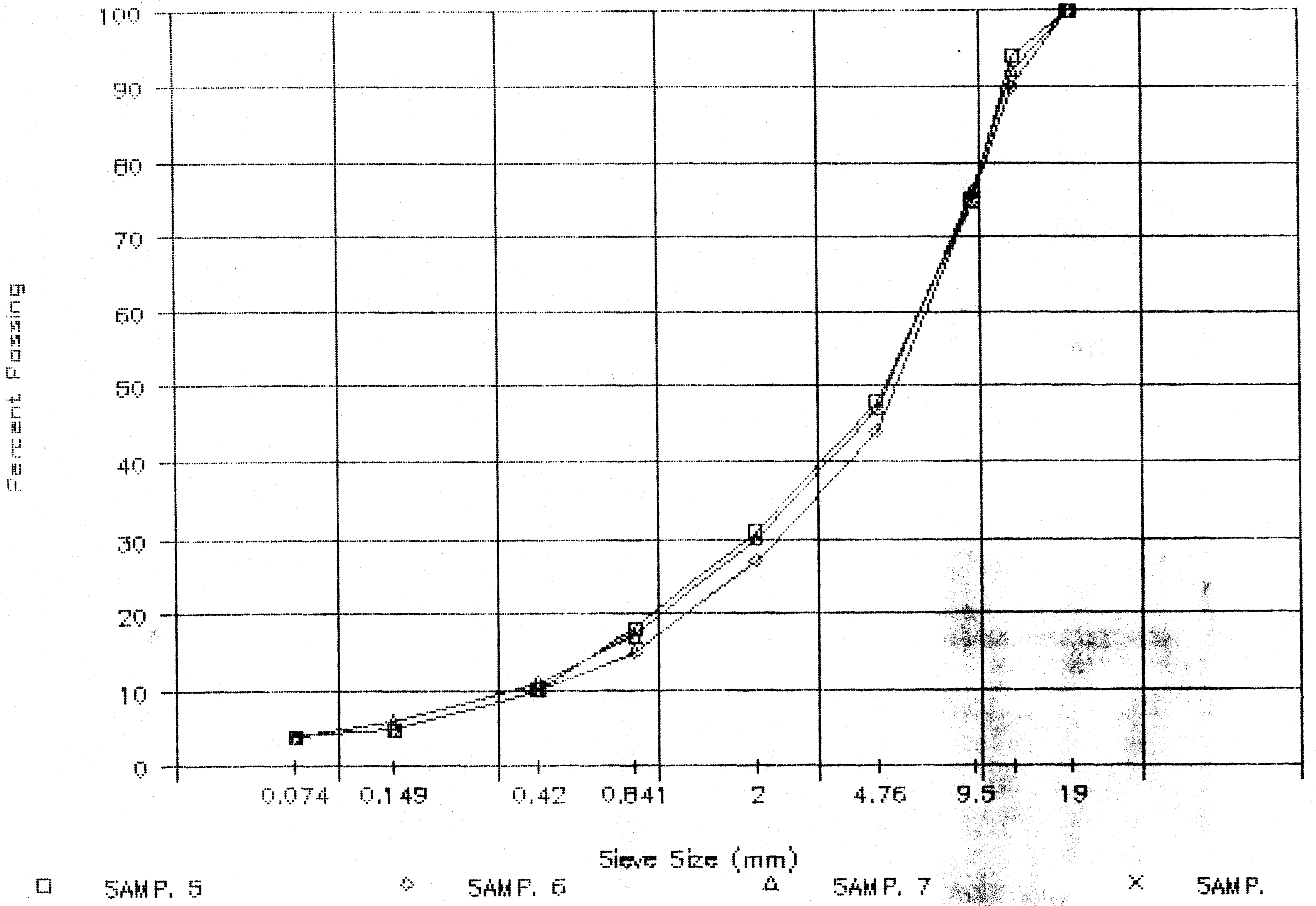
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 53
% SAND: 43
% FINES: 4

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-030



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-04C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.19

FIELD NO: 8
LAB NO: 2860
DEPTH: 1.3-1.7
TYPE: BULK
CC = 83%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	89
9.5	70
4.76	44
2.38	--
2.00	29
1.19	--
0.841	18
0.595	--
0.42	11
0.297	--
0.177	--
0.149	5
0.074	3

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 56
% SAND: 41
% FINES: 3

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

FIELD NO: 9
LAB NO: 2861
DEPTH: 3.3-3.6
TYPE: BULK
CC = 84%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	94
9.5	75
4.76	42
2.38	--
2.00	25
1.19	--
0.841	14
0.595	--
0.42	8
0.297	--
0.177	--
0.149	4
0.074	3

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 58
% SAND: 39
% FINES: 3

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

FIELD NO: 10
LAB NO: 2862
DEPTH: 5.2-5.5
TYPE: BULK
CC = 84%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	85
9.5	66
4.76	37
2.38	--
2.00	21
1.19	--
0.841	12
0.595	--
0.42	8
0.297	--
0.177	--
0.149	4
0.074	3

M.C.(%): --

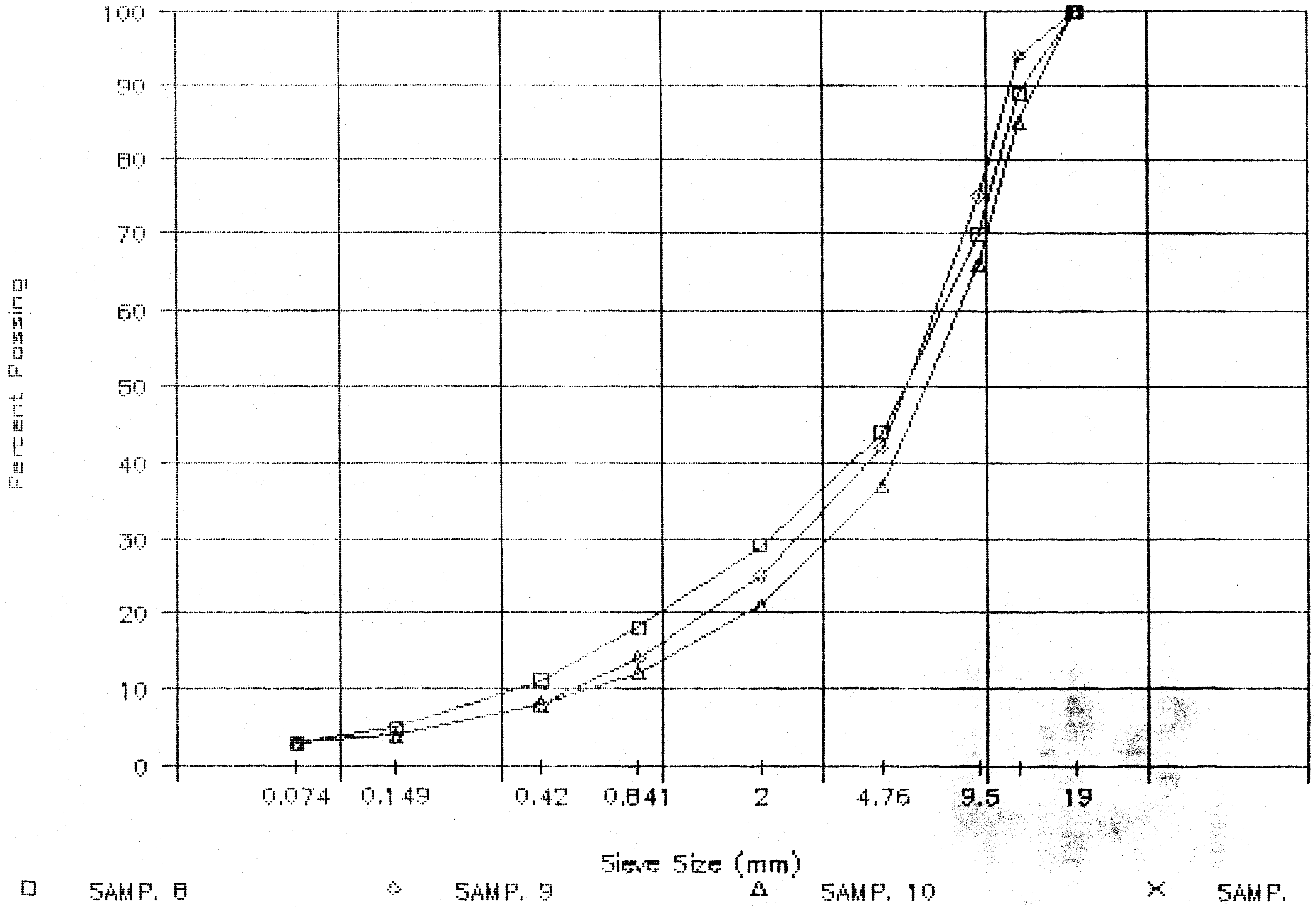
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 63
% SAND: 34
% FINES: 3

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029--040



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-05C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.19

FIELD NO: 11
LAB NO: 2863
DEPTH: 1.5-2.0
TYPE: BULK
CC = 77%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	82
9.5	66
4.76	39
2.38	--
2.00	25
1.19	--
0.841	15
0.595	--
0.42	9
0.297	--
0.177	--
0.149	4
0.074	3

M.C.(%): --

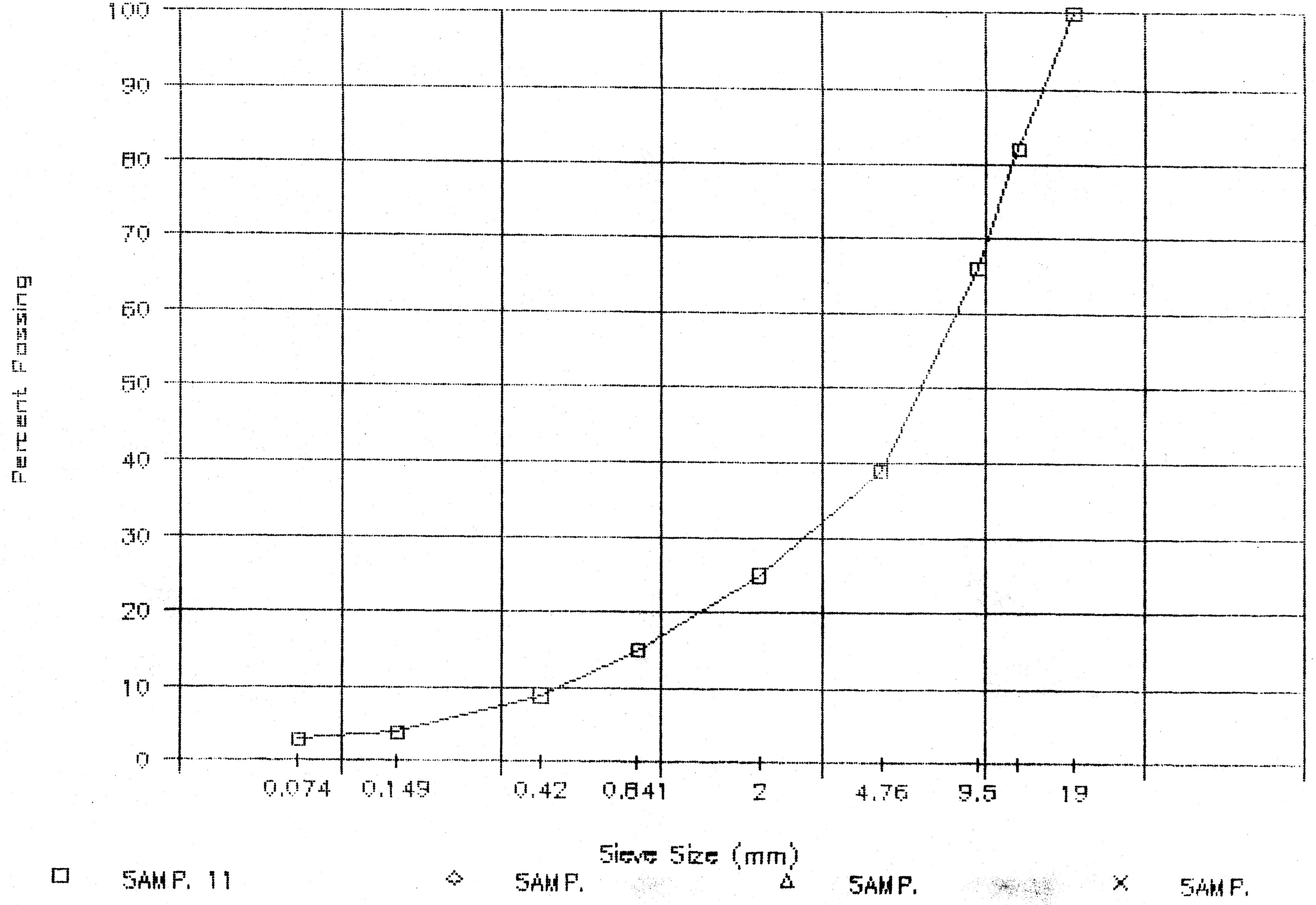
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 61
% SAND: 37
% FINES: 3

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-050



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-06C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.19

FIELD NO: 12
LAB NO: 2864
DEPTH: 1.5-1.9
TYPE: BULK
CC = 71%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	89
9.5	74
4.76	46
2.38	--
2.00	30
1.19	--
0.841	13
0.595	--
0.42	11
0.297	--
0.177	--
0.149	5
0.074	3

M.C.(%): --

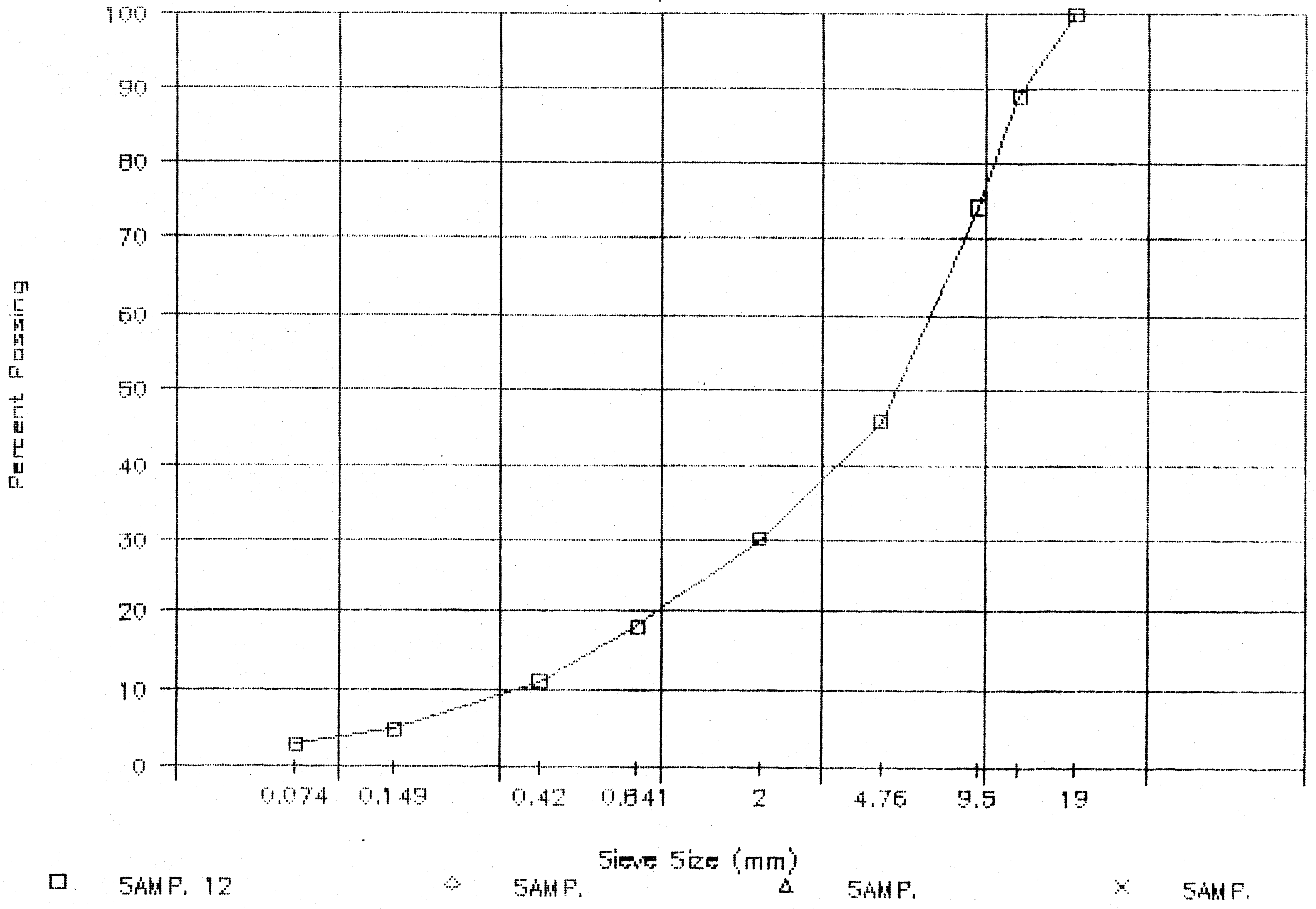
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 54
% SAND: 42
% FINES: 3

CLASSIFICATION:
WELL-GRADED GRAVEL WITH SAND (GW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-060



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-07C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.19

FIELD NO: 13
LAB NO: 2865
DEPTH: 1.5-2.0
TYPE: BULK
CC = 67%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	92
9.5	79
4.76	52
2.38	--
2.00	34
1.19	--
0.841	20
0.595	--
0.42	12
0.297	--
0.177	--
0.149	4
0.074	3

M.C.(%): --

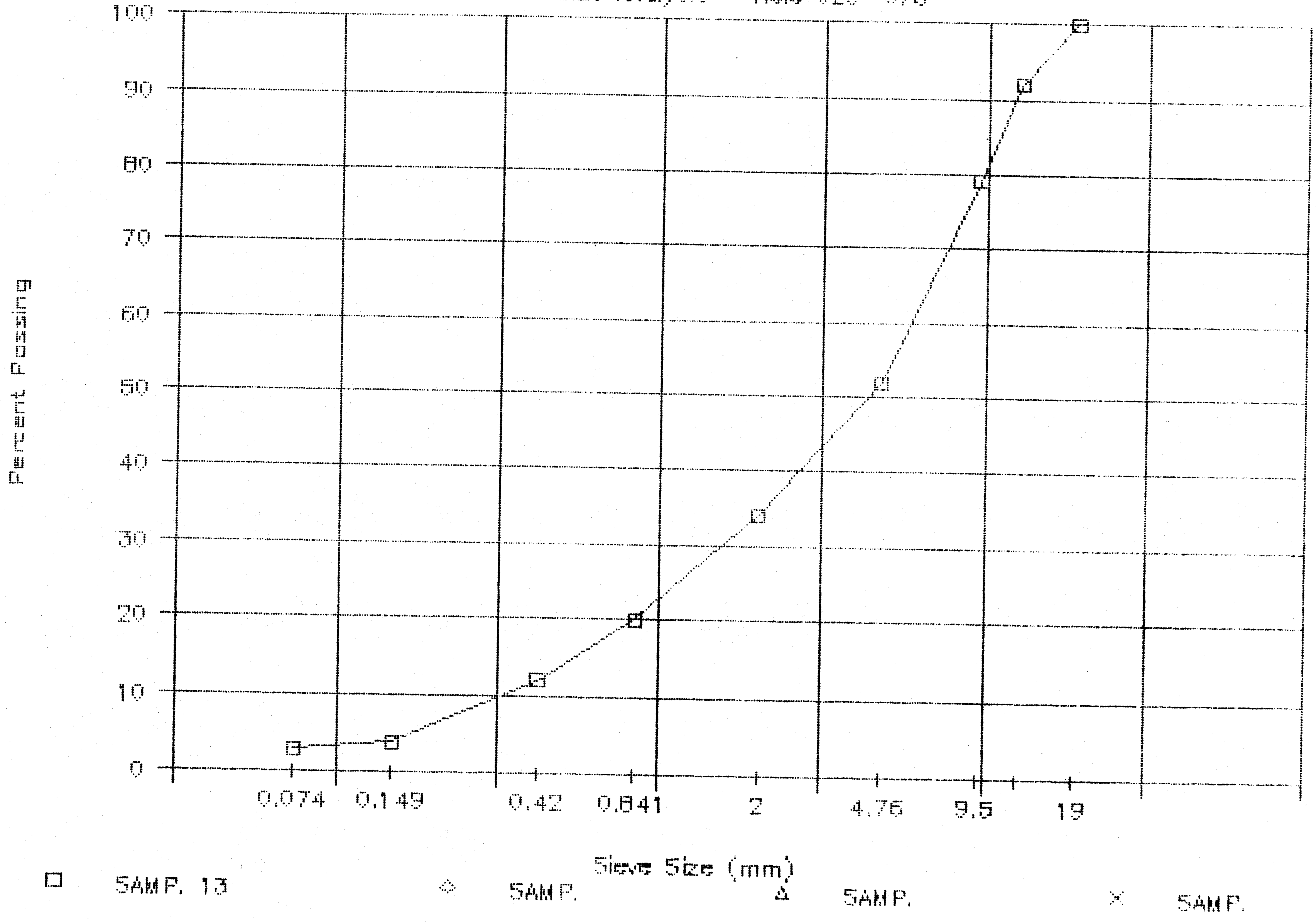
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 48
% SAND: 49
% FINES: 3

CLASSIFICATION:
WELL-GRADED SAND
WITH GRAVEL (SW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-07C



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-08C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.19

FIELD NO: 15
LAB NO: 2866
DEPTH: 3.5-4.0
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	95
9.5	81
4.76	55
2.38	--
2.00	38
1.19	--
0.841	22
0.595	--
0.42	13
0.297	--
0.177	--
0.149	6
0.074	4

M.C.(%): --

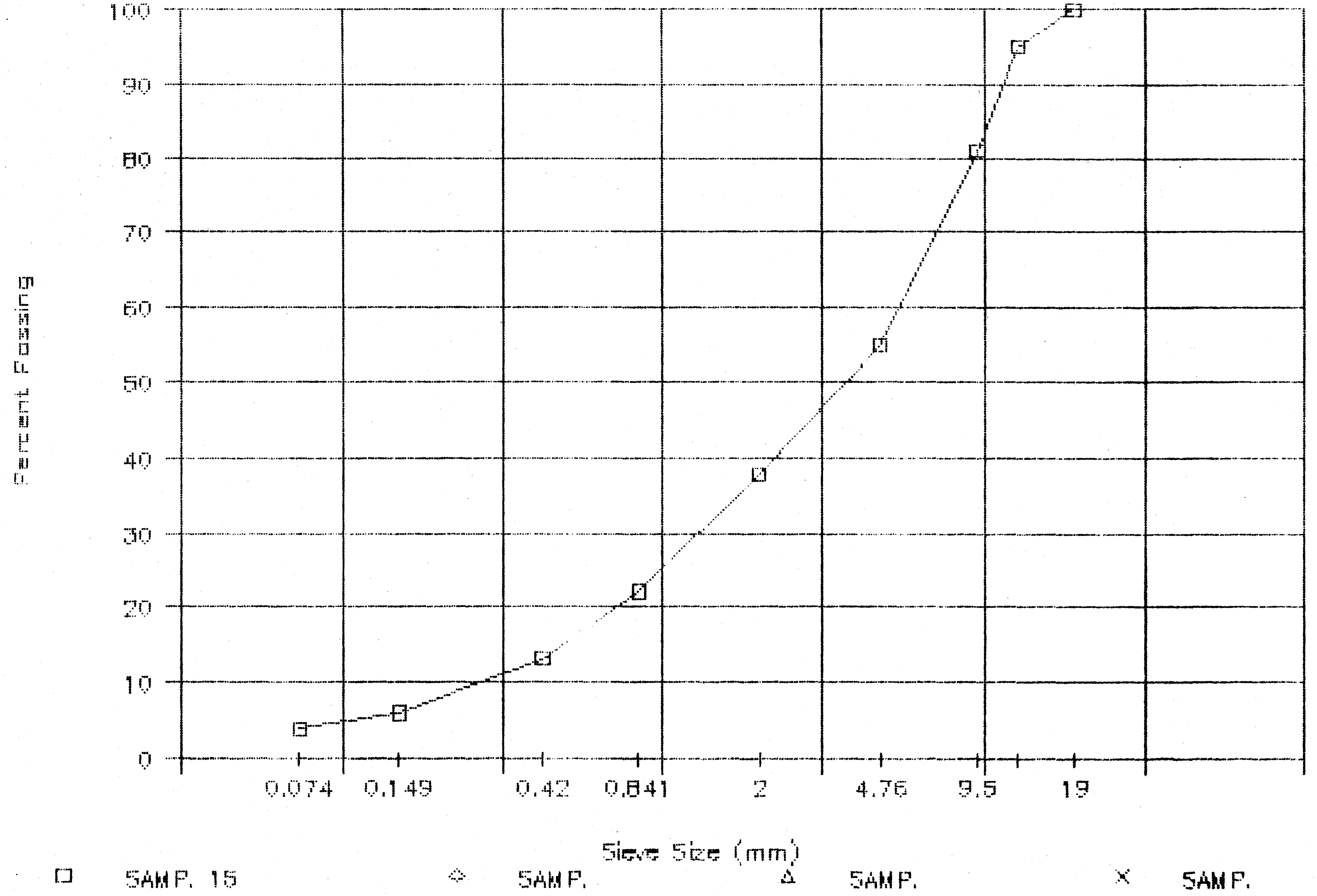
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 45
% SAND: 52
% FINES: 4

CLASSIFICATION:
WELL-GRADED SAND
WITH GRAVEL (SW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis -- Hole 029--08C



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-09C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.20

FIELD NO: 16
LAB NO: 2867
DEPTH: 1.4-1.8
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	95
9.5	85
4.76	61
2.38	--
2.00	46
1.19	--
0.841	36
0.595	--
0.42	29
0.297	--
0.177	--
0.149	19
0.074	13

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 39
% SAND: 47
% FINES: 13

CLASSIFICATION:
SILTY SAND WITH GRAVEL (SM)

FIELD NO: 17
LAB NO: 2868
DEPTH: 3.3-3.7
TYPE: BULK
CC = 79%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	93
9.5	77
4.76	50
2.38	--
2.00	33
1.19	--
0.841	24
0.595	--
0.42	18
0.297	--
0.177	--
0.149	8
0.074	5

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 50
% SAND: 45
% FINES: 5

CLASSIFICATION:
WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)

FIELD NO: 18
LAB NO: 2869
DEPTH: 5.0-5.5
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	98
9.5	89
4.76	65
2.38	--
2.00	46
1.19	--
0.841	31
0.595	--
0.42	23
0.297	--
0.177	--
0.149	12
0.074	7

M.C.(%): --

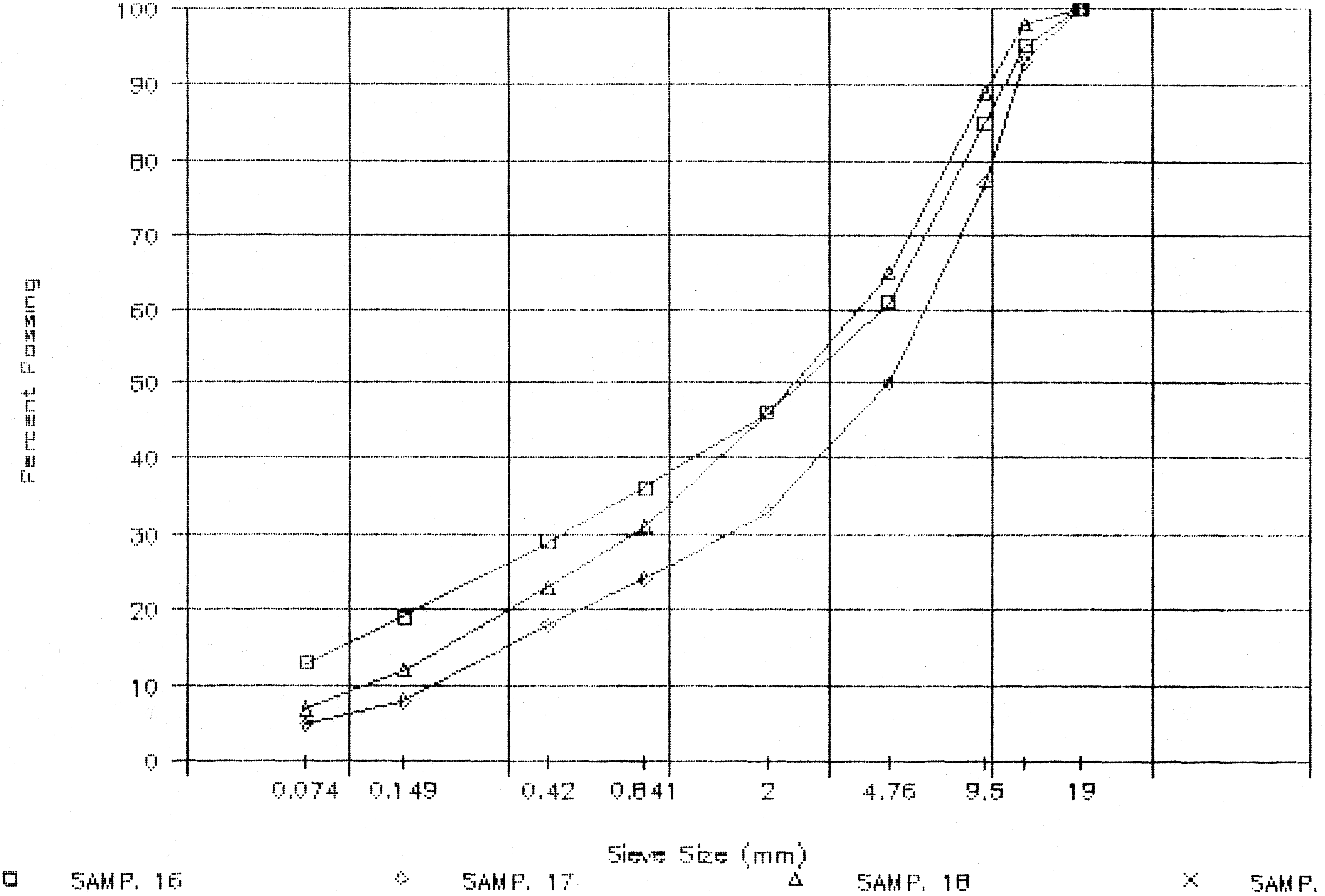
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 35
% SAND: 59
% FINES: 7

CLASSIFICATION:
WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-090



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-10C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.20

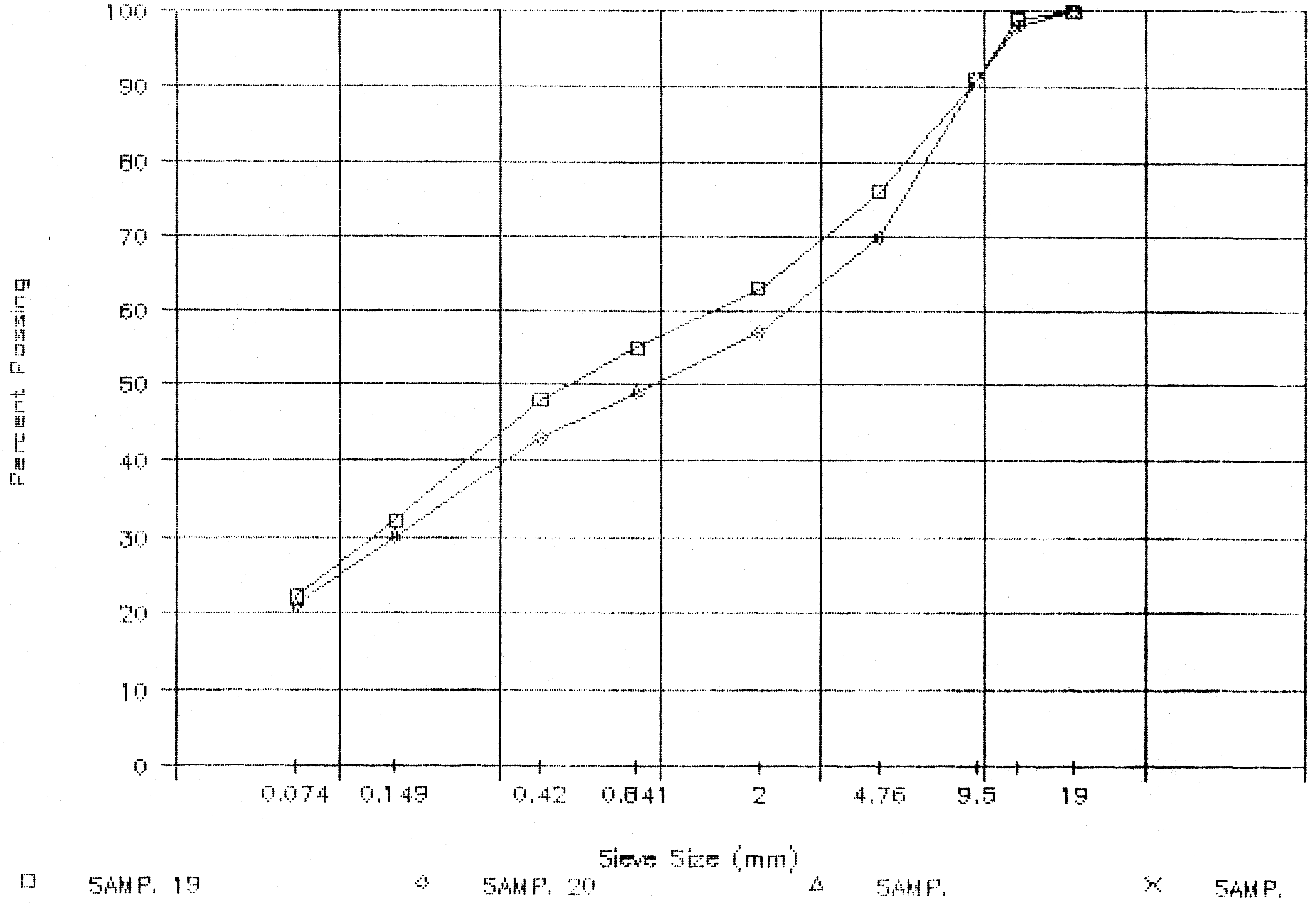
FIELD NO:	19	FIELD NO:	20
LAB NO:	2870	LAB NO:	2871
DEPTH:	1.6-2.1	DEPTH:	3.1-3.5
TYPE:	BULK	TYPE:	BULK

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	--
76.2	--	76.2	--
50.8	--	50.8	--
38.1	--	38.1	--
25.4	--	25.4	--
19.0	100	19.0	100
12.7	99	12.7	98
9.5	91	9.5	91
4.76	76	4.76	70
2.38	--	2.38	--
2.00	63	2.00	57
1.19	--	1.19	--
0.841	55	0.841	49
0.595	--	0.595	--
0.42	48	0.42	43
0.297	--	0.297	--
0.177	--	0.177	--
0.149	32	0.149	30
0.074	22	0.074	21

M.C.(%):	--	M.C.(%):	--
LIMITS		LIMITS	
LIQUID:	--	LIQUID:	--
PLASTIC:	--	PLASTIC:	--
P.I.:	N.P.	P.I.:	N.P.
% GRAVEL:	24	% GRAVEL:	30
% SAND:	54	% SAND:	49
% FINES:	22	% FINES:	21
CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)		CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)	

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis -- Hole 029-10C



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-11C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.20

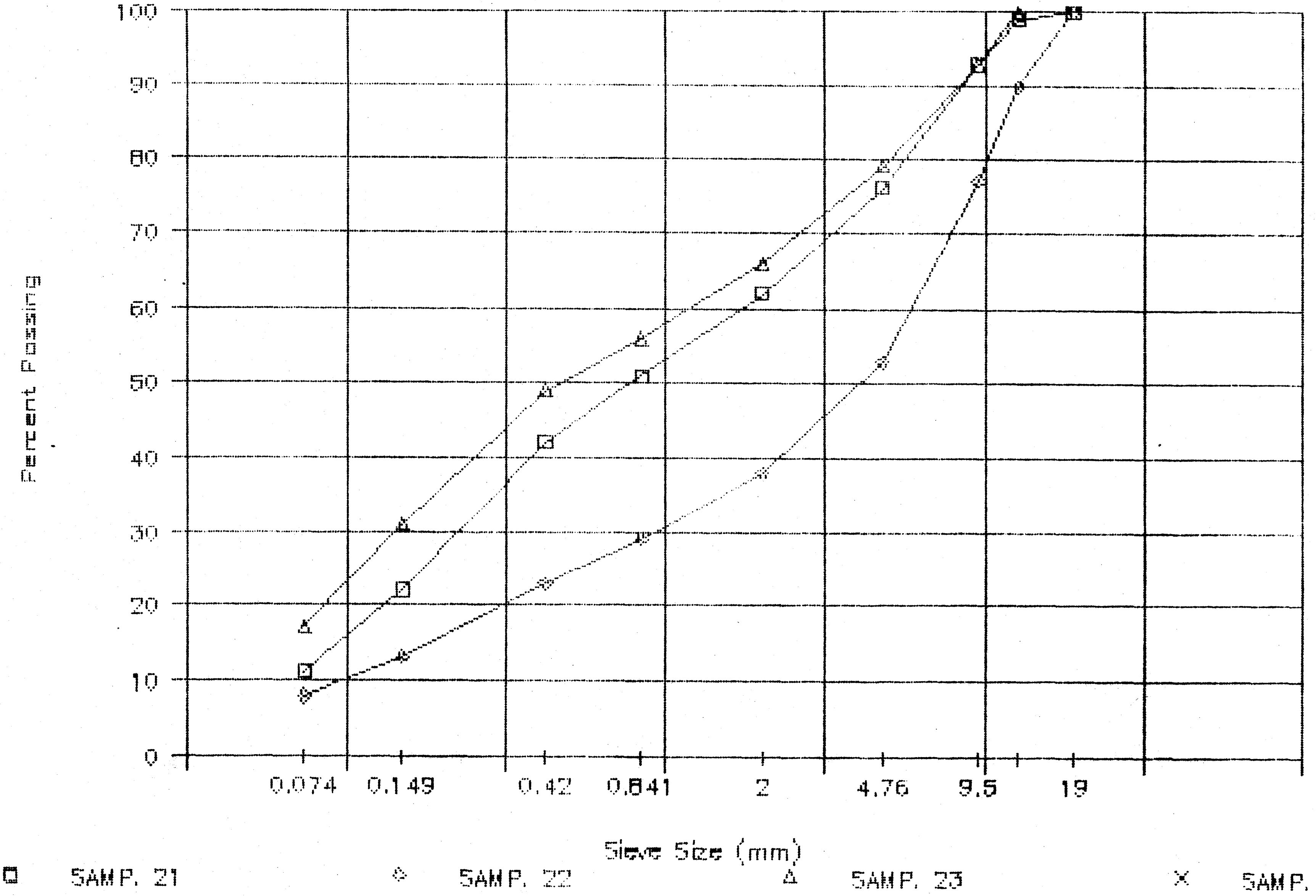
FIELD NO:	21	FIELD NO:	22	FIELD NO:	23
LAB NO:	2872	LAB NO:	2873	LAB NO:	2874
DEPTH:	1.6-2.0	DEPTH:	3.3-3.7	DEPTH:	5.1-5.5
TYPE:	BULK	TYPE:	BULK	TYPE:	BULK

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	--	101.6	--
76.2	--	76.2	--	76.2	--
50.8	--	50.8	--	50.8	--
38.1	--	38.1	--	38.1	--
25.4	--	25.4	--	25.4	--
19.0	100	19.0	100	19.0	--
12.7	99	12.7	90	12.7	100
9.5	93	9.5	77	9.5	93
4.76	76	4.76	53	4.76	79
2.38	--	2.38	--	2.38	--
2.00	62	2.00	38	2.00	66
1.19	--	1.19	--	1.19	--
0.841	51	0.841	29	0.841	56
0.595	--	0.595	--	0.595	--
0.42	42	0.42	23	0.42	49
0.297	--	0.297	--	0.297	--
0.177	--	0.177	--	0.177	--
0.149	22	0.149	13	0.149	31
0.074	11	0.074	8	0.074	17

M.C.(%):	--	M.C.(%):	--	M.C.(%):	--
LIMITS		LIMITS		LIMITS	
LIQUID:	--	LIQUID:	--	LIQUID:	--
PLASTIC:	--	PLASTIC:	--	PLASTIC:	--
P.I.:	N.P.	P.I.:	N.P.	P.I.:	N.P.
% GRAVEL:	24	% GRAVEL:	47	% GRAVEL:	21
% SAND:	65	% SAND:	45	% SAND:	62
% FINES:	11	% FINES:	8	% FINES:	17
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)		WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)		SILTY SAND WITH GRAVEL (SM)	

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-11C



PROJECT NUMBER: 115-G-04
HOLE NUMBER: 029-12C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT
DATE COMPLETED: 88.10.20

FIELD NO: 24
LAB NO: 2875
DEPTH: 1.7-2.1
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	97
9.5	89
4.76	70
2.38	--
2.00	56
1.19	--
0.841	43
0.595	--
0.42	33
0.297	--
0.177	--
0.149	13
0.074	5

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 30
% SAND: 65
% FINES: 5

CLASSIFICATION:
POORLY GRADED SAND WITH SILT & GRAVEL (SP-SM)

FIELD NO: 25
LAB NO: 2876
DEPTH: 3.3-3.6
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	99
9.5	96
4.76	86
2.38	--
2.00	78
1.19	--
0.841	72
0.595	--
0.42	67
0.297	--
0.177	--
0.149	53
0.074	35

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 14
% SAND: 51
% FINES: 35

CLASSIFICATION:
SILTY SAND (SM)

FIELD NO: 26
LAB NO: 2877
DEPTH: 5.1-5.5
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	97
9.5	88
4.76	68
2.38	--
2.00	51
1.19	--
0.841	37
0.595	--
0.42	28
0.297	--
0.177	--
0.149	14
0.074	8

M.C.(%): --

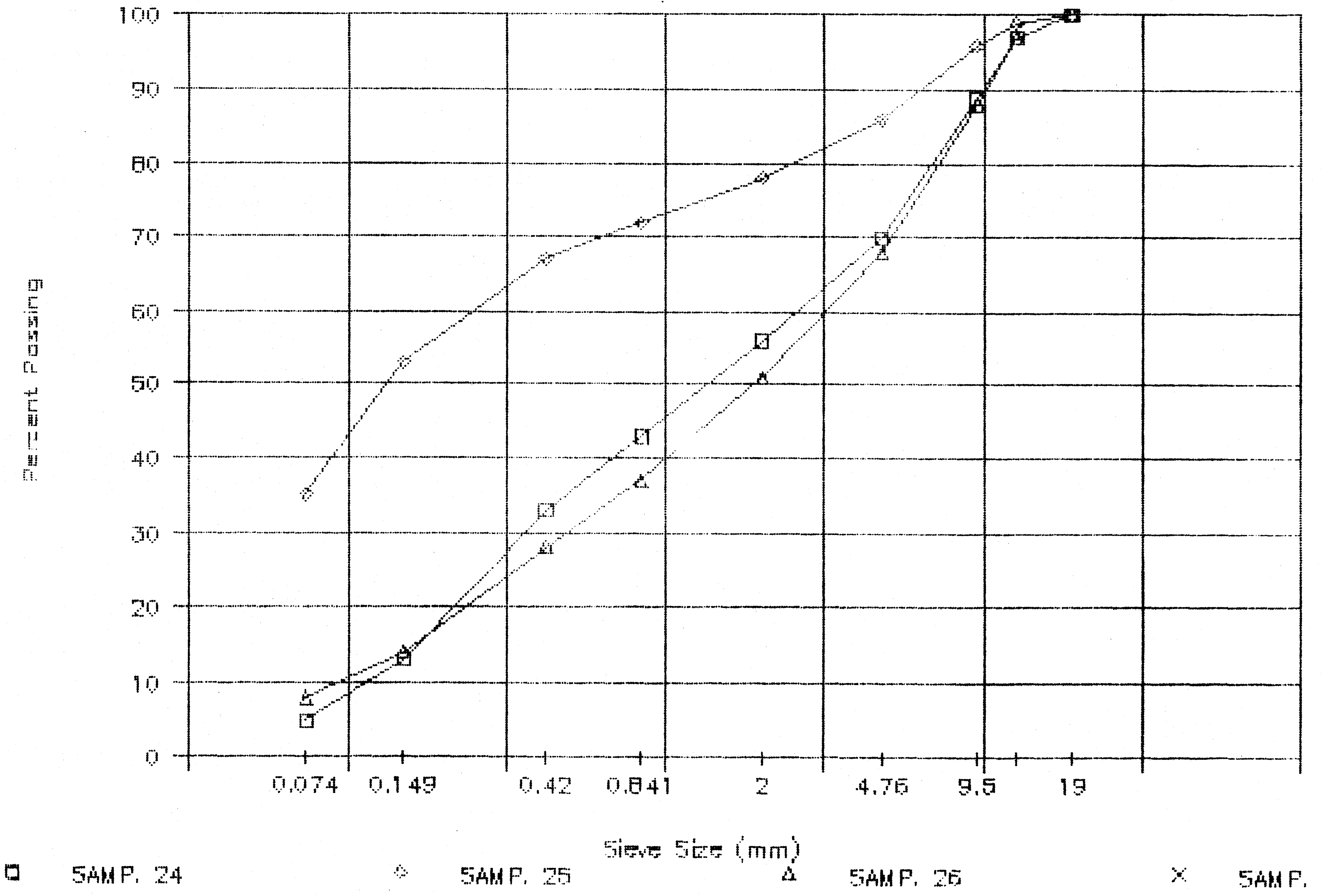
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 32
% SAND: 60
% FINES: 8

CLASSIFICATION:
POORLY GRADED SAND WITH SILT & GRAVEL (SP-SM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-120



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-13C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.20

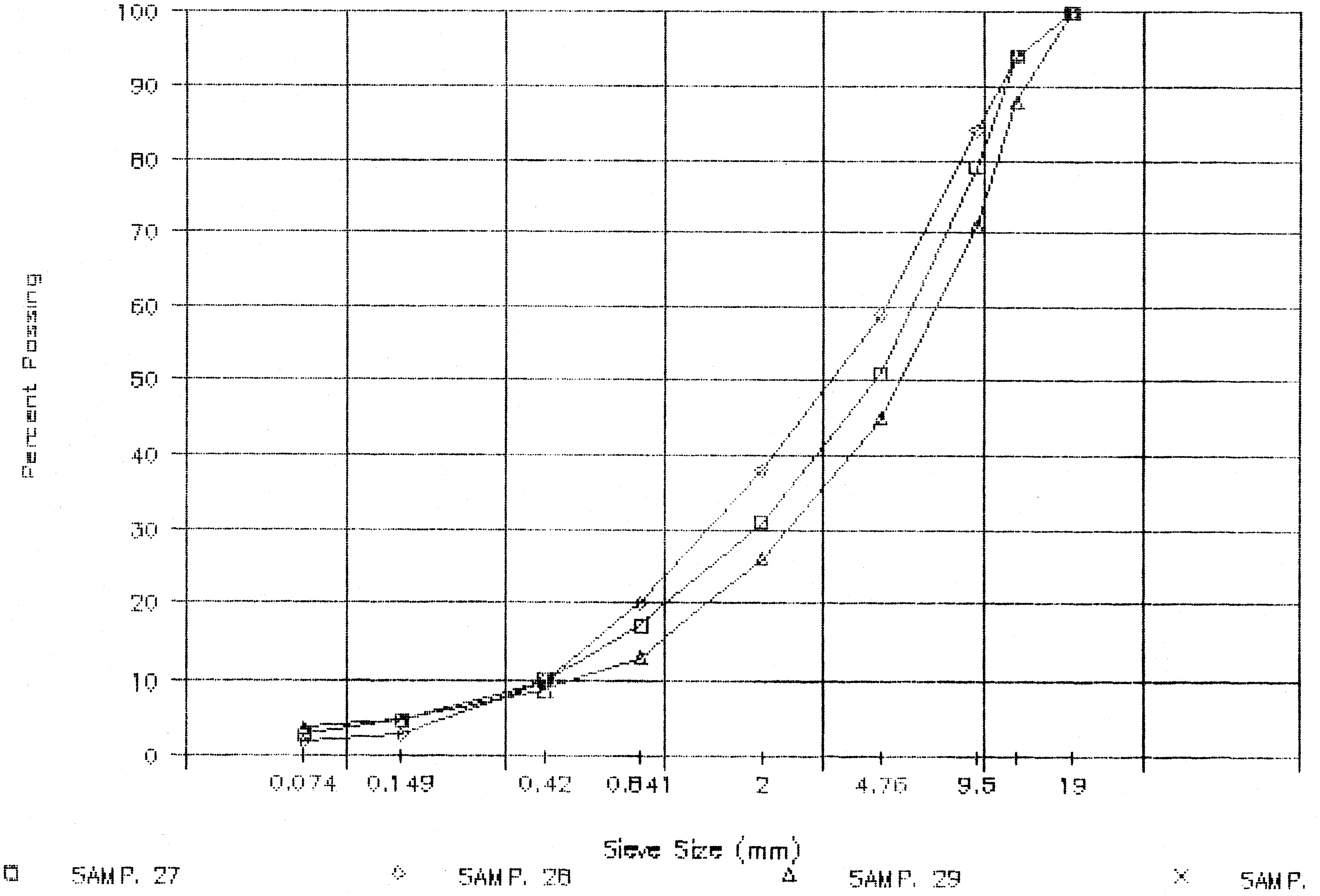
FIELD NO: 27	FIELD NO: 28	FIELD NO: 29
LAB NO: 2878	LAB NO: 2879	LAB NO: 2880
DEPTH: 0.6-1.0	DEPTH: 3.1-3.6	DEPTH: 4.5-5.0
TYPE: BULK	TYPE: BULK	TYPE: BULK
		CC = 74%

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	--	101.6	--
76.2	--	76.2	--	76.2	--
50.8	--	50.8	--	50.8	--
38.1	--	38.1	--	38.1	--
25.4	--	25.4	--	25.4	--
19.0	100	19.0	100	19.0	100
12.7	94	12.7	94	12.7	88
9.5	79	9.5	84	9.5	71
4.76	51	4.76	59	4.76	45
2.38	--	2.38	--	2.38	--
2.00	31	2.00	38	2.00	26
1.19	--	1.19	--	1.19	--
0.841	17	0.841	20	0.841	13
0.595	--	0.595	--	0.595	--
0.42	10	0.42	10	0.42	9
0.297	--	0.297	--	0.297	--
0.177	--	0.177	--	0.177	--
0.149	5	0.149	3	0.149	5
0.074	3	0.074	2	0.074	4

M.C.(%): --	M.C.(%): --	M.C.(%): --
LIMITS	LIMITS	LIMITS
LIQUID: --	LIQUID: --	LIQUID: --
PLASTIC: --	PLASTIC: --	PLASTIC: --
P.I.: N.P.	P.I.: N.P.	P.I.: N.P.
% GRAVEL: 49	% GRAVEL: 41	% GRAVEL: 55
% SAND: 47	% SAND: 57	% SAND: 41
% FINES: 3	% FINES: 2	% FINES: 4
CLASSIFICATION: WELL-GRADED GRAVEL WITH SAND (GW)	CLASSIFICATION: POORLY GRADED SAND WITH GRAVEL (SP)	CLASSIFICATION: WELL-GRADED GRAVEL WITH SAND (GW)

* PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-130



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-14C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.20

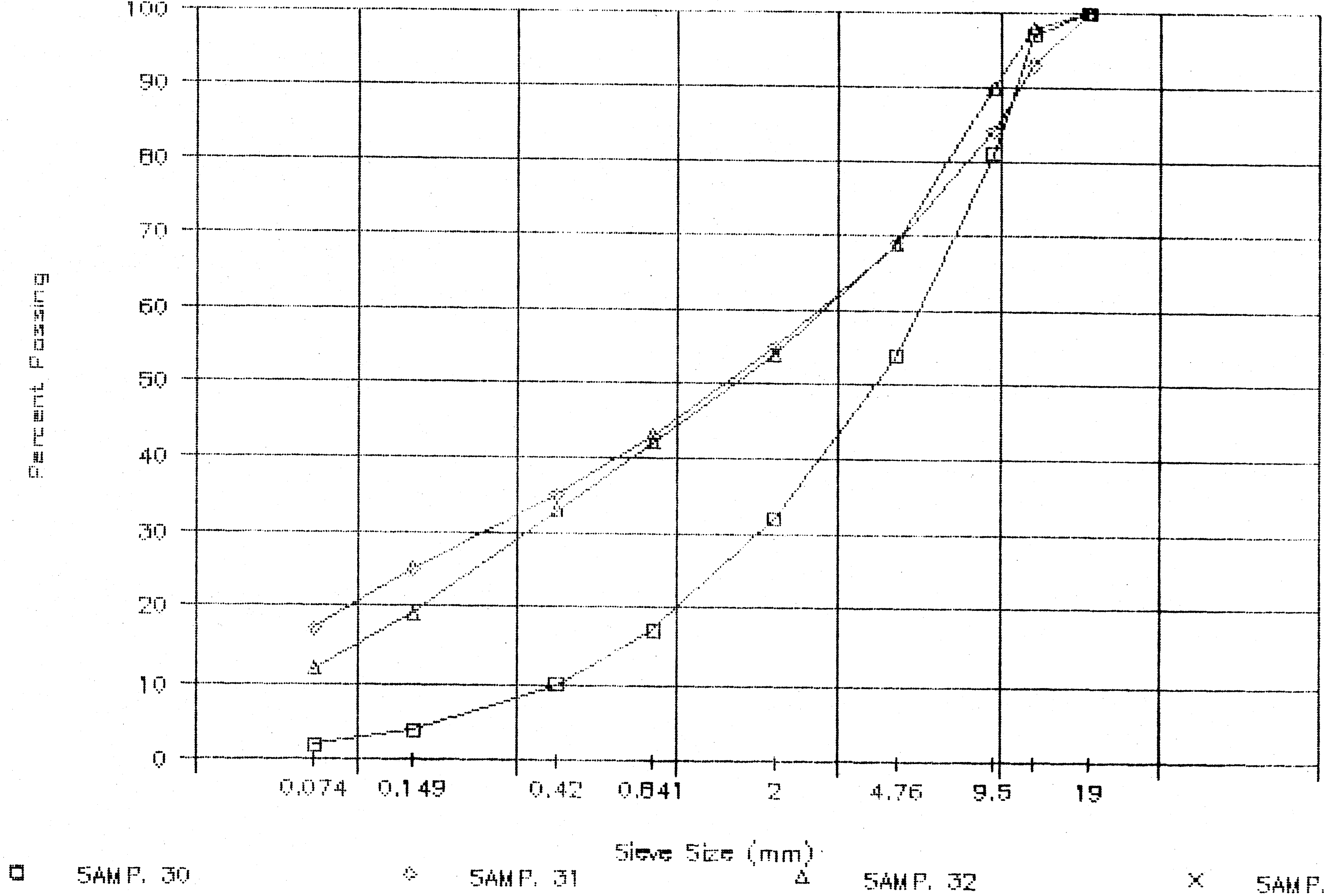
FIELD NO:	30	FIELD NO:	31	FIELD NO:	32
LAB NO:	2881	LAB NO:	2882	LAB NO:	2883
DEPTH:	1.6-2.0	DEPTH:	3.6-4.0	DEPTH:	5.2-5.4
TYPE:	BULK	TYPE:	BULK	TYPE:	BULK

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	--	101.6	--
76.2	--	76.2	--	76.2	--
50.8	--	50.8	--	50.8	--
38.1	--	38.1	--	38.1	--
25.4	--	25.4	--	25.4	--
19.0	100	19.0	100	19.0	100
12.7	97	12.7	93	12.7	98
9.5	81	9.5	84	9.5	90
4.76	54	4.76	69	4.76	69
2.38	--	2.38	--	2.38	--
2.00	32	2.00	55	2.00	54
1.19	--	1.19	--	1.19	--
0.841	17	0.841	43	0.841	42
0.595	--	0.595	--	0.595	--
0.42	10	0.42	35	0.42	33
0.297	--	0.297	--	0.297	--
0.177	--	0.177	--	0.177	--
0.149	4	0.149	25	0.149	19
0.074	2	0.074	17	0.074	12

M.C.(%):	--	M.C.(%):	--	M.C.(%):	--
LIMITS		LIMITS		LIMITS	
LIQUID:	--	LIQUID:	--	LIQUID:	--
PLASTIC:	--	PLASTIC:	--	PLASTIC:	--
P.I.:	N.P.	P.I.:	N.P.	P.I.:	N.P.
% GRAVEL:	46	% GRAVEL:	31	% GRAVEL:	31
% SAND:	52	% SAND:	53	% SAND:	57
% FINES:	2	% FINES:	17	% FINES:	12
CLASSIFICATION: WELL-GRADED SAND WITH GRAVEL (SW)		CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)		CLASSIFICATION: WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	

PUBLIC WORKS CANADA – WHITEHORSE, Y.T.

Grain Size Analysis – Hole 029–140



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-15C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.20

FIELD NO: 33
LAB NO: 2884
DEPTH: 0.8-1.2
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	92
9.5	79
4.76	51
2.38	--
2.00	32
1.19	--
0.841	19
0.595	--
0.42	12
0.297	--
0.177	--
0.149	4
0.074	2

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 49
% SAND: 49
% FINES: 2

CLASSIFICATION:
WELL-GRADED SAND WITH GRAVEL (SW)

FIELD NO: 34
LAB NO: 2885
DEPTH: 3.0-3.4
TYPE: BULK
CC = 64%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	90
9.5	72
4.76	44
2.38	--
2.00	28
1.19	--
0.841	17
0.595	--
0.42	11
0.297	--
0.177	--
0.149	4
0.074	3

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 56
% SAND: 42
% FINES: 3

CLASSIFICATION:
WELL-GRADED GRAVEL WITH SAND (GW)

FIELD NO: 35
LAB NO: 2886
DEPTH: 4.8-5.2
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	97
9.5	79
4.76	51
2.38	--
2.00	35
1.19	--
0.841	22
0.595	--
0.42	14
0.297	--
0.177	--
0.149	6
0.074	5

M.C.(%): --

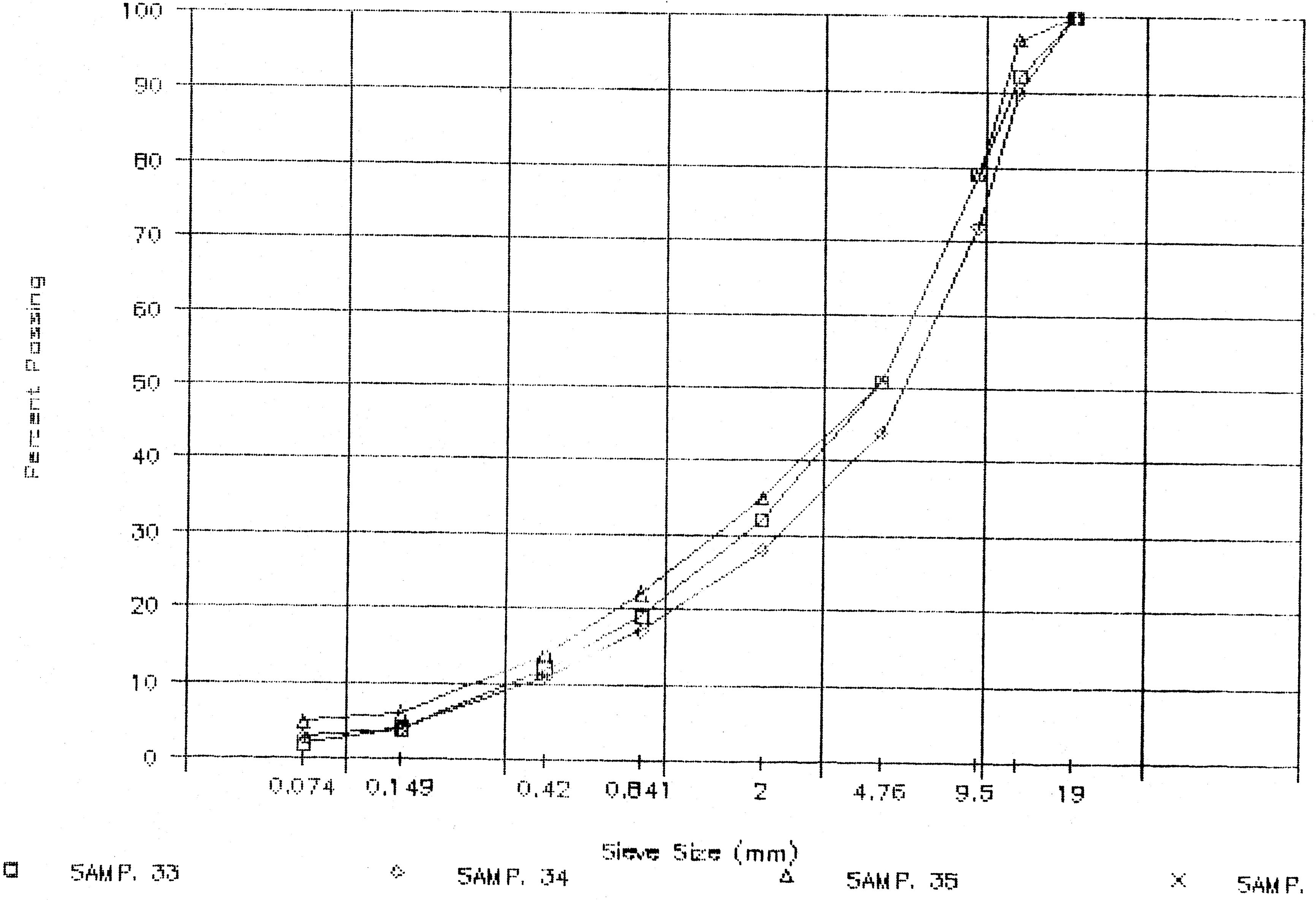
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 49
% SAND: 47
% FINES: 5

CLASSIFICATION:
WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-150



PROJECT NUMBER: 115-G-04
HOLE NUMBER: 029-16C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT
DATE COMPLETED: 88.10.21

FIELD NO: 36
LAB NO: 2887
DEPTH: 1.5-1.9
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	90
9.5	76
4.76	51
2.38	--
2.00	34
1.19	--
0.841	21
0.595	--
0.42	13
0.297	--
0.177	--
0.149	6
0.074	4

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 49
% SAND: 47
% FINES: 4

CLASSIFICATION:
WELL-GRADED GRAVEL WITH SAND (GW)

FIELD NO: 37
LAB NO: 2888
DEPTH: 2.6-3.0
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	94
9.5	80
4.76	52
2.38	--
2.00	33
1.19	--
0.841	20
0.595	--
0.42	11
0.297	--
0.177	--
0.149	4
0.074	3

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 48
% SAND: 49
% FINES: 3

CLASSIFICATION:
WELL-GRADED SAND WITH GRAVEL (SW)

FIELD NO: 38
LAB NO: 2889
DEPTH: 4.6-5.0
TYPE: BULK
CC = 84%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	93
9.5	77
4.76	50
2.38	--
2.00	32
1.19	--
0.841	~~52~~ 20
0.595	--
0.42	13
0.297	--
0.177	--
0.149	5
0.074	3

M.C.(%): --

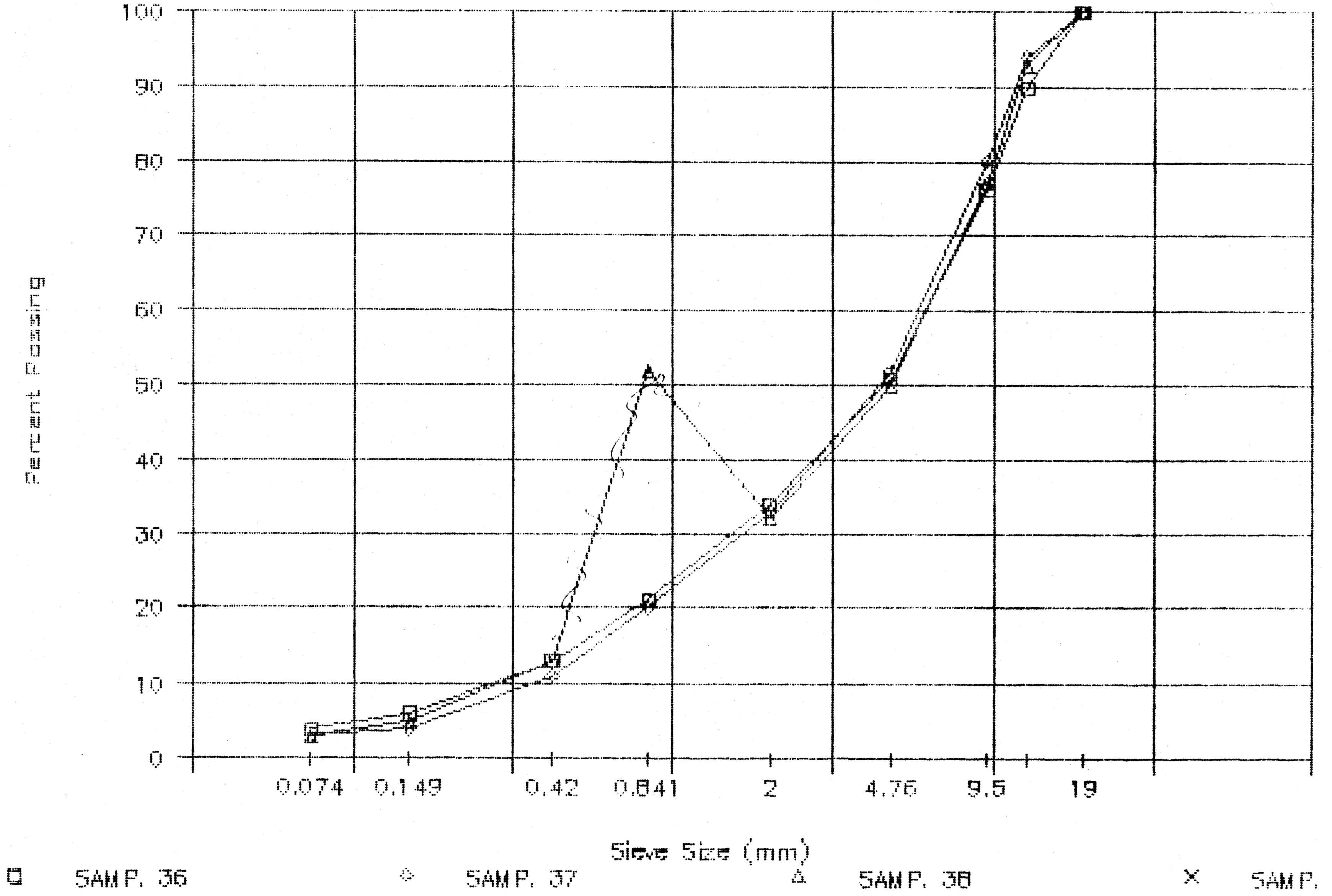
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 50
% SAND: 47
% FINES: 3

CLASSIFICATION:
POORLY GRADED GRAVEL WITH SAND (GP)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-160



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-17C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.21

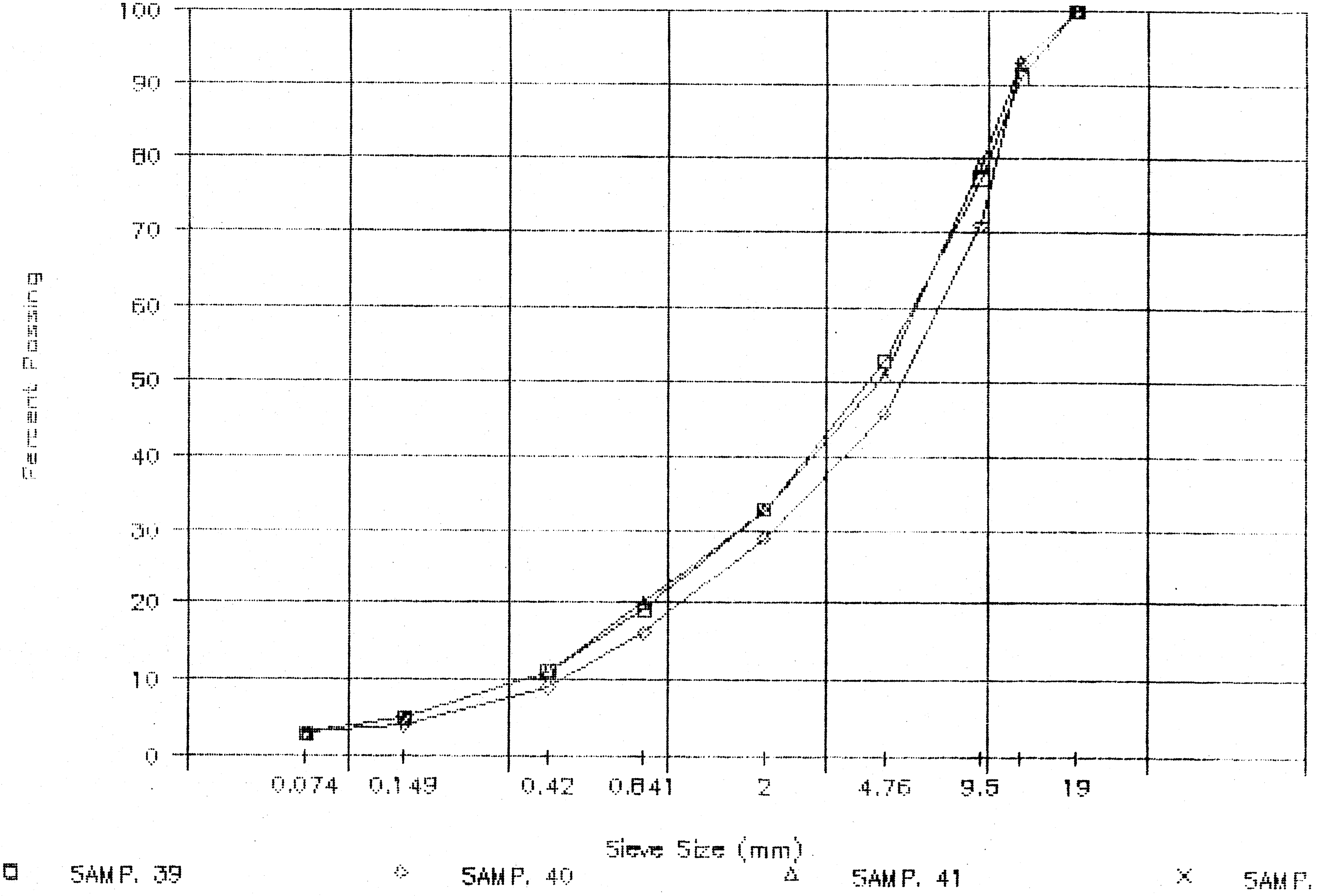
FIELD NO: 39	FIELD NO: 40	FIELD NO: 41
LAB NO: 2890	LAB NO: 2891	LAB NO: 2892
DEPTH: 1.1-1.5	DEPTH: 2.6-3.0	DEPTH: 4.6-5.0
TYPE: BULK	TYPE: BULK	TYPE: BULK
	CC = 67%	

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	--	101.6	--
76.2	--	76.2	--	76.2	--
50.8	--	50.8	--	50.8	--
38.1	--	38.1	--	38.1	--
25.4	--	25.4	--	25.4	--
19.0	100	19.0	100	19.0	100
12.7	91	12.7	93	12.7	93
9.5	77	9.5	71	9.5	79
4.76	53	4.76	46	4.76	51
2.38	--	2.38	--	2.38	--
2.00	33	2.00	29	2.00	33
1.19	--	1.19	--	1.19	--
0.841	19	0.841	16	0.841	20
0.595	--	0.595	--	0.595	--
0.42	11	0.42	9	0.42	11
0.297	--	0.297	--	0.297	--
0.177	--	0.177	--	0.177	--
0.149	5	0.149	4	0.149	5
0.074	3	0.074	3	0.074	3

M.C.(%): --	M.C.(%): --	M.C.(%): --
LIMITS	LIMITS	LIMITS
LIQUID: --	LIQUID: --	LIQUID: --
PLASTIC: --	PLASTIC: --	PLASTIC: --
P.I.: N.P.	P.I.: N.P.	P.I.: N.P.
% GRAVEL: 47	% GRAVEL: 54	% GRAVEL: 49
% SAND: 50	% SAND: 43	% SAND: 48
% FINES: 3	% FINES: 3	% FINES: 3
CLASSIFICATION: WELL-GRADED SAND WITH GRAVEL (SW)	CLASSIFICATION: WELL-GRADED GRAVEL WITH SAND (GW)	CLASSIFICATION: WELL-GRADED GRAVEL WITH SAND (GW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-170



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-18C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.21

FIELD NO: 42
LAB NO: 2893
DEPTH: 2.4-2.8
TYPE: BULK
CC = 76%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	93
9.5	77
4.76	49
2.38	--
2.00	31
1.19	--
0.841	17
0.595	--
0.42	10
0.297	--
0.177	--
0.149	5
0.074	3

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 51
% SAND: 46
% FINES: 3

CLASSIFICATION:
WELL-GRADED GRAVEL WITH SAND (GW)

FIELD NO: 43
LAB NO: 2894
DEPTH: 3.8-4.2
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	100
9.5	99
4.76	99
2.38	--
2.00	98
1.19	--
0.841	94
0.595	--
0.42	90
0.297	--
0.177	--
0.149	83
0.074	69

M.C.(%): --

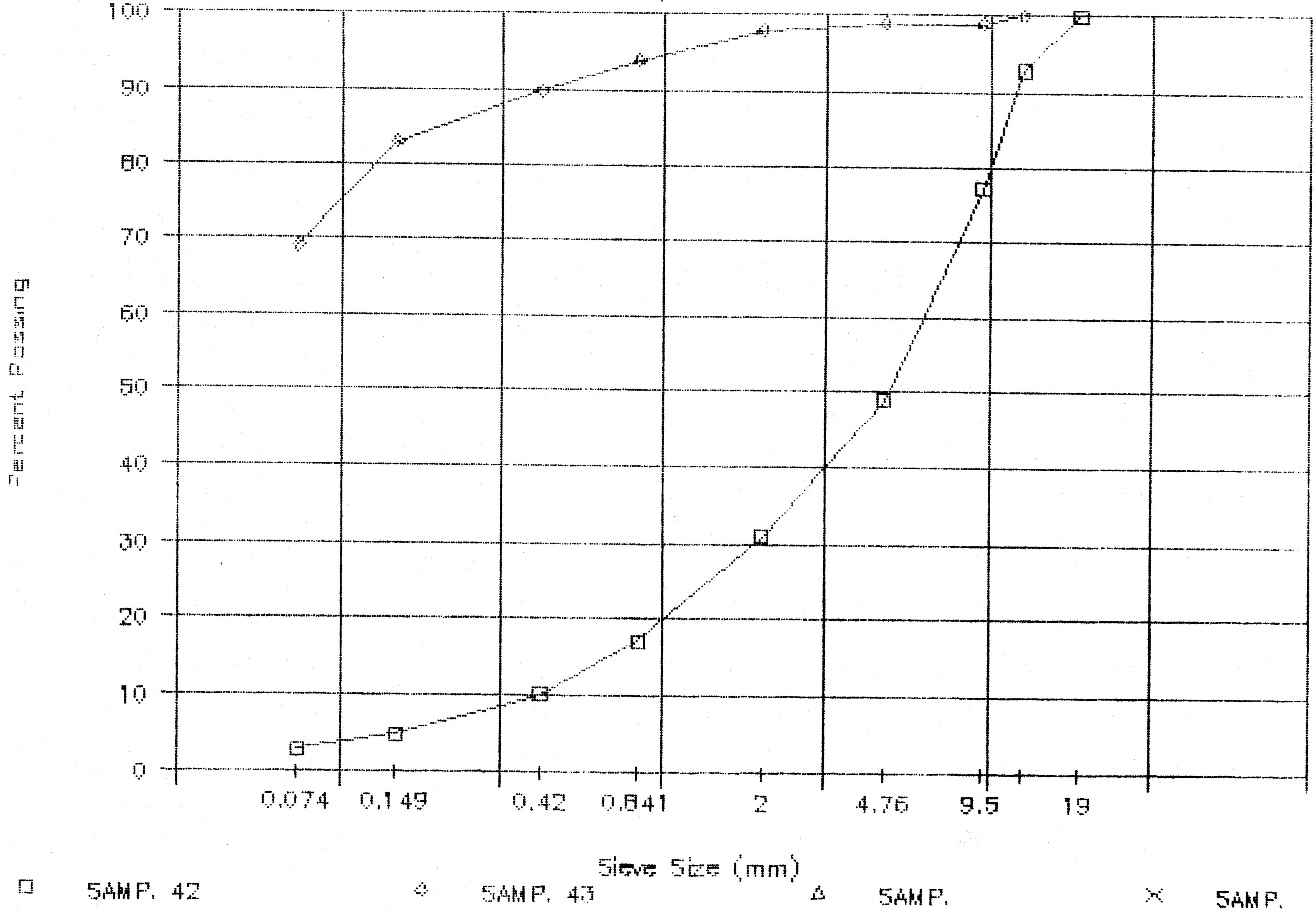
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 1
% SAND: 30
% FINES: 69

CLASSIFICATION:
SANDY SILT (ML)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-18C



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-19C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.21

FIELD NO: 44
LAB NO: 2895
DEPTH: 1.6-2.0
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	94
9.5	85
4.76	59
2.38	--
2.00	41
1.19	--
0.841	26
0.595	--
0.42	16
0.297	--
0.177	--
0.149	6
0.074	3

M.C.(%): --

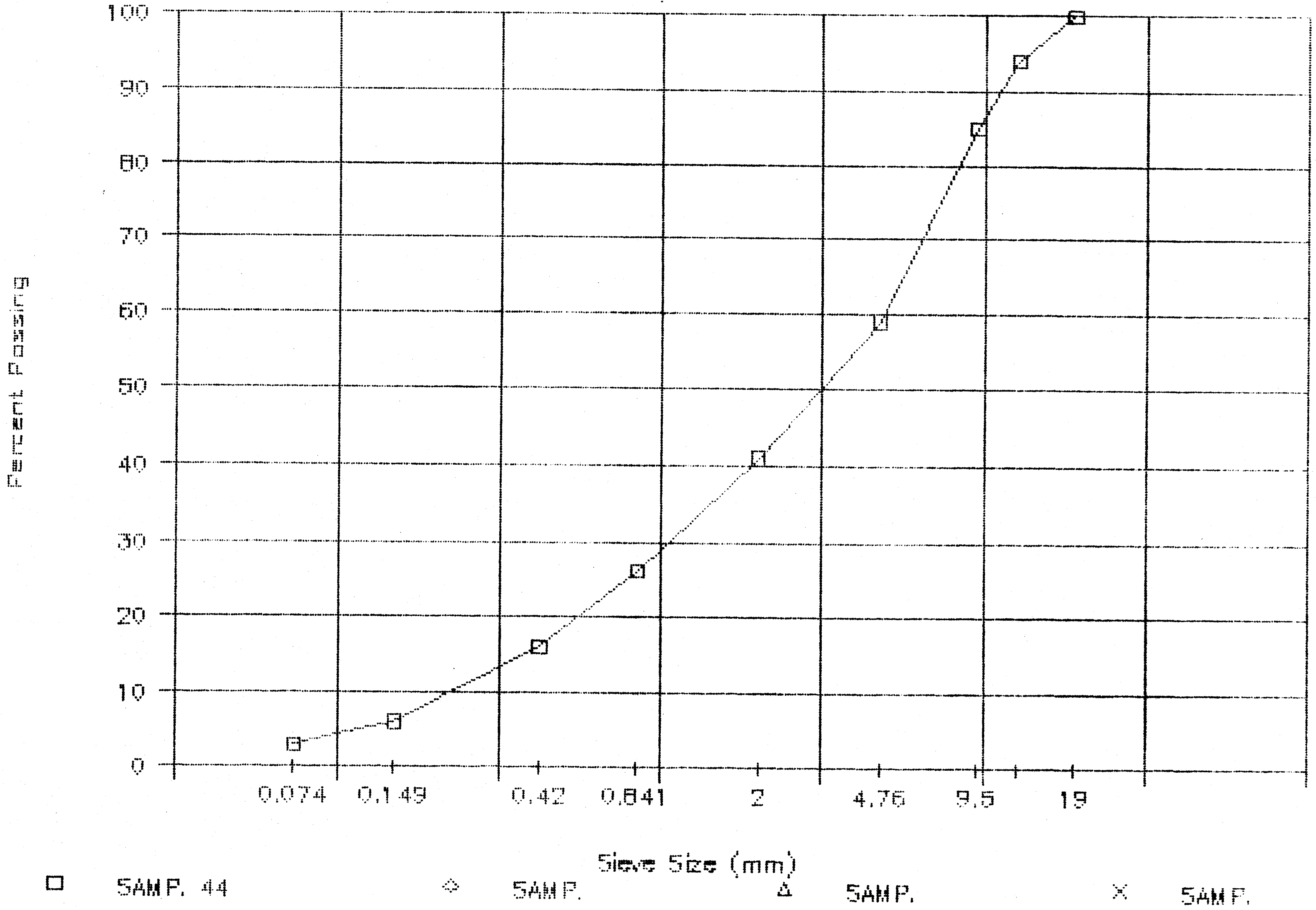
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 41
% SAND: 56
% FINES: 3

CLASSIFICATION:
WELL-GRADED SAND
WITH GRAVEL (SW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-190



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 029-20C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.21

FIELD NO: 45
LAB NO: 2896
DEPTH: 0.8-1.2
TYPE: BULK
CC = 68%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	90
9.5	74
4.76	48
2.38	--
2.00	28
1.19	--
0.841	18
0.595	--
0.42	12
0.297	--
0.177	--
0.149	5
0.074	3

M.C.(%): --

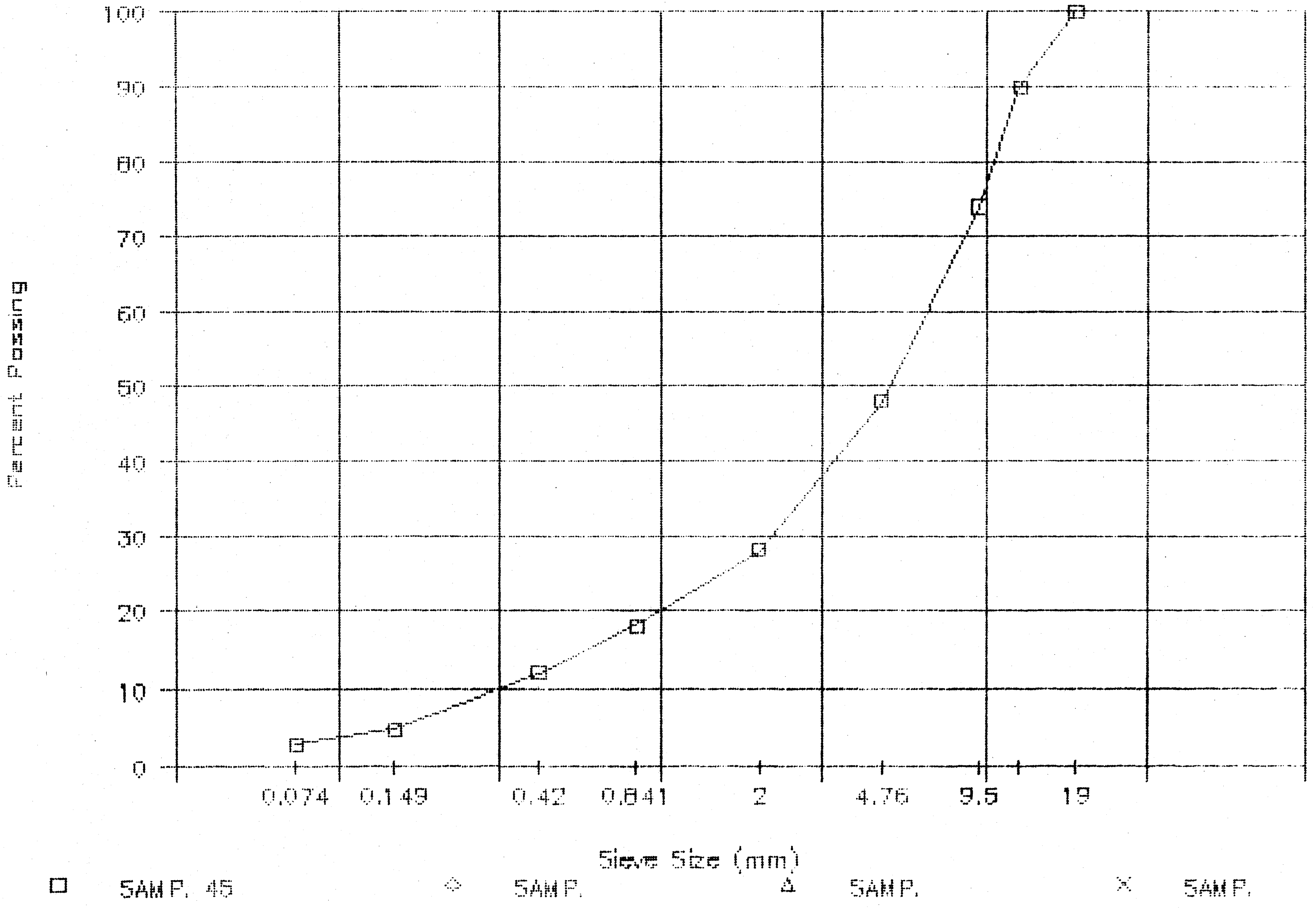
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 52
% SAND: 45
% FINES: 3

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 029-200



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-22C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.21

FIELD NO: 47
LAB NO: 2897
DEPTH: 0.8-1.2
TYPE: BULK
CC = 69%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	93
9.5	78
4.76	48
2.38	--
2.00	30
1.19	--
0.841	17
0.595	--
0.42	11
0.297	--
0.177	--
0.149	4
0.074	3

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 52
% SAND: 45
% FINES: 3

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

FIELD NO: 48
LAB NO: 2898
DEPTH: 2.6-3.0
TYPE: BULK
CC = 80%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	99

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: --
% SAND: --
% FINES: --

CLASSIFICATION:

FIELD NO: 49
LAB NO: 2899
DEPTH: 4.3-4.7
TYPE: BULK
CC = 83%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	93
9.5	73
4.76	44
2.38	--
2.00	27
1.19	--
0.841	17
0.595	--
0.42	11
0.297	--
0.177	--
0.149	5
0.074	3

M.C.(%): --

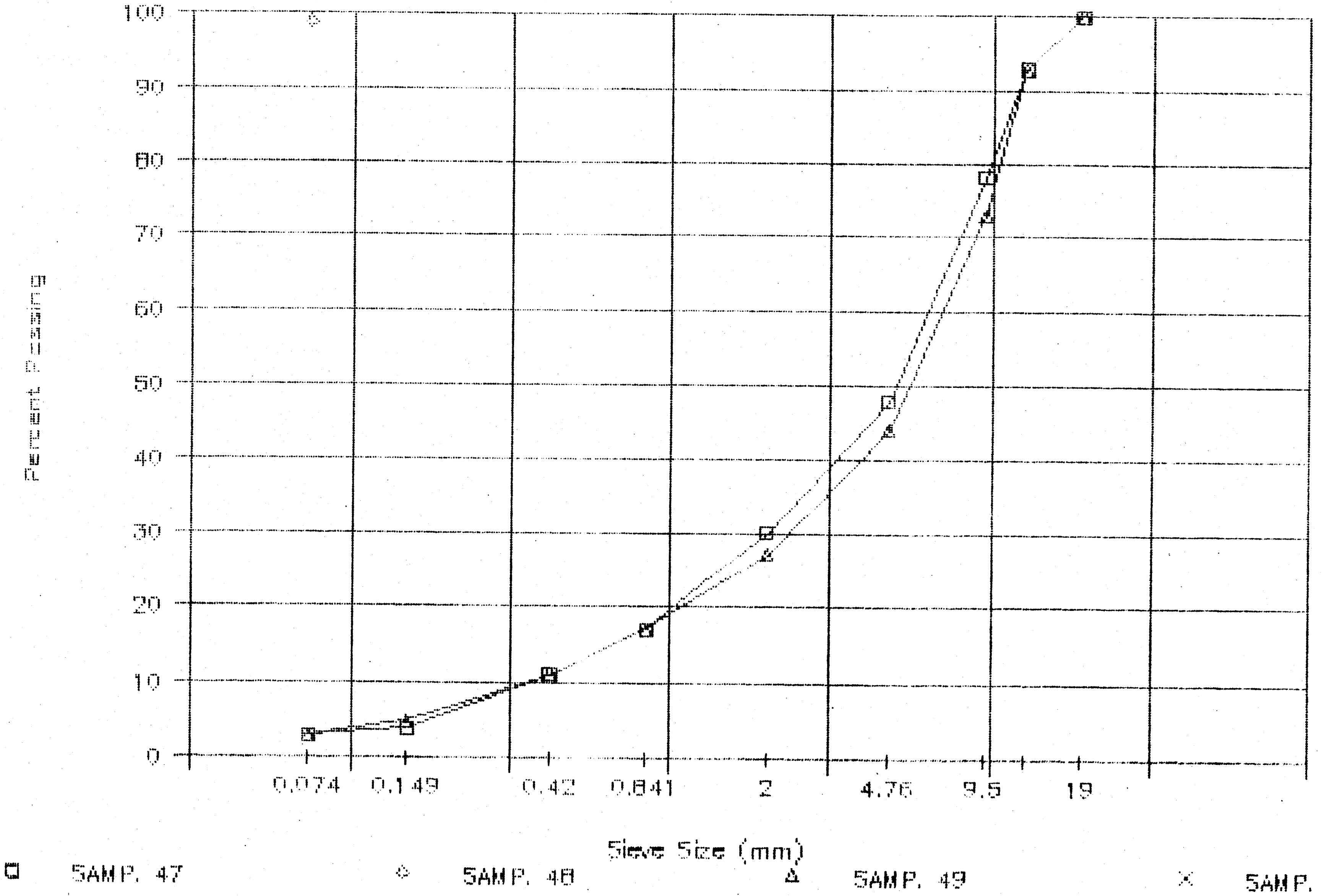
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 56
% SAND: 41
% FINES: 3

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis – Hole 030-225



```
|=========================================================================
| PROJECT NUMBER:    115-G-04               HOLE NUMBER:      030-23C
| CLIENT:            PWC CAPITAL - Y.T.
| PROJECT NAME:      ALASKA HIGHWAY PRE-ENGINEERING
| PROJECT LOCATION:  A/H KM 1749.5 LHS
| DRILL UNIT:        CAT 225 HOE
| HOLE LOCATION:     SEE PLAN
| LOGGED BY:         DT                     DATE COMPLETED:   88.10.22
|
|=========================================================================
|                  |                  |                  |
| FIELD NO:      50 | FIELD NO:      51 | FIELD NO:      52 |
| LAB NO:  2900     | LAB NO:  2901     | LAB NO:  2902     |
| DEPTH:   0.8-1.2  | DEPTH:   2.8-3.2  | DEPTH:   3.9-4.3  |
| TYPE:    BULK     | TYPE:    BULK     | TYPE:    BULK     |
| CC = 61%          | CC = 64%          | CC = 80%          |
|                   |                   |                   |
|                   |                   |                   |
| SIEVE   |PERCENT  | SIEVE   |PERCENT  | SIEVE   |PERCENT  |
| SIZE    |PASSING  | SIZE    |PASSING  | SIZE    |PASSING  |
| ----------------- | ----------------- | ----------------- |
| 101.6   |   --    | 101.6   |   --    | 101.6   |   --    |
|  76.2   |   --    |  76.2   |   --    |  76.2   |   --    |
|  50.8   |   --    |  50.8   |   --    |  50.8   |   --    |
|  38.1   |   --    |  38.1   |   --    |  38.1   |   --    |
|  25.4   |   --    |  25.4   |   --    |  25.4   |   --    |
|  19.0   |  100    |  19.0   |  100    |  19.0   |  100    |
|  12.7   |   93    |  12.7   |   93    |  12.7   |   93    |
|   9.5   |   82    |   9.5   |   77    |   9.5   |   77    |
|   4.76  |   54    |   4.76  |   50    |   4.76  |   53    |
|   2.38  |   --    |   2.38  |   --    |   2.38  |   --    |
|   2.00  |   36    |   2.00  |   31    |   2.00  |   36    |
|   1.19  |   --    |   1.19  |   --    |   1.19  |   --    |
|   0.841 |   22    |   0.841 |   19    |   0.841 |   23    |
|   0.595 |   --    |   0.595 |   --    |   0.595 |   --    |
|   0.42  |   14    |   0.42  |   12    |   0.42  |   15    |
|   0.297 |   --    |   0.297 |   --    |   0.297 |   --    |
|   0.177 |   --    |   0.177 |   --    |   0.177 |   --    |
|   0.149 |   5     |   0.149 |   5     |   0.149 |   6     |
|   0.074 |   3     |   0.074 |   3     |   0.074 |   4     |
|                   |                   |                   |
|                   |                   |                   |
| M.C.(%):      --  | M.C.(%):      --  | M.C.(%):      --  |
|                   |                   |                   |
|     LIMITS        |     LIMITS        |     LIMITS        |
| LIQUID:       --  | LIQUID:       --  | LIQUID:       --  |
| PLASTIC:      --  | PLASTIC:      --  | PLASTIC:      --  |
| P.I.:       N.P.  | P.I.:       N.P.  | P.I.:       N.P.  |
|                   |                   |                   |
|                   |                   |                   |
| % GRAVEL:     46  | % GRAVEL:     50  | % GRAVEL:     47  |
| % SAND:       51  | % SAND:       47  | % SAND:       49  |
| % FINES:       3  | % FINES:       3  | % FINES:       4  |
|                   |                   |                   |
| CLASSIFICATION:   | CLASSIFICATION:   | CLASSIFICATION:   |
| WELL-GRADED SAND  | WELL-GRADED       | WELL-GRADED SAND  |
| WITH GRAVEL (SW)  | GRAVEL WITH SAND  | WITH GRAVEL (SW)  |
|                   | (GW)              |                   |
|=========================================================================
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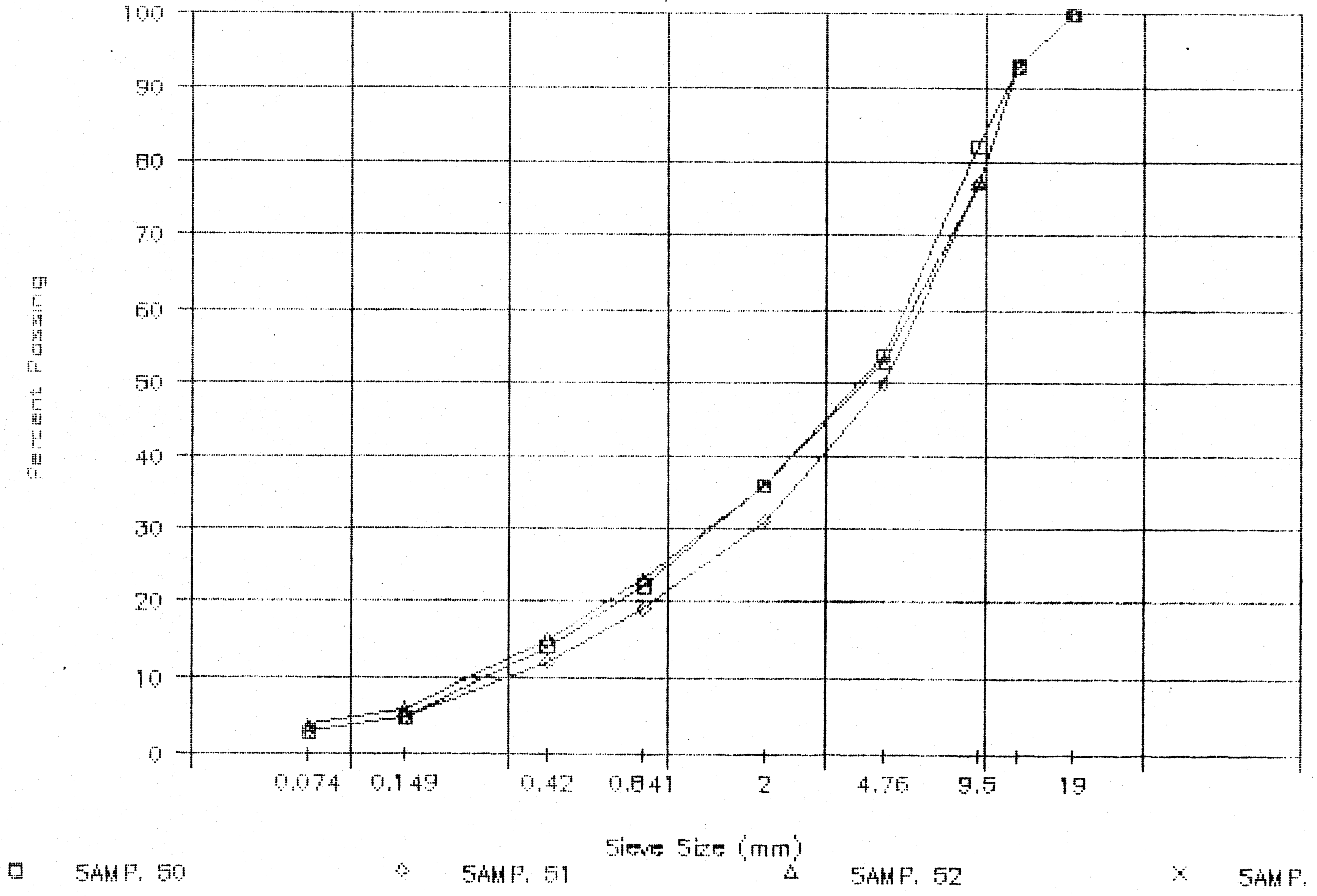
PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030--230



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-24C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.22

FIELD NO: 53
LAB NO: 2903
DEPTH: 2.8-3.2
TYPE: BULK
CC = 69%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	97
9.5	85
4.76	63
2.38	--
2.00	49
1.19	--
0.841	39
0.595	--
0.42	32
0.297	--
0.177	--
0.149	20
0.074	12

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 37
% SAND: 50
% FINES: 12

CLASSIFICATION:
WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)

FIELD NO: 54
LAB NO: 2904
DEPTH: 4.0-4.4
TYPE: BULK
CC = 66%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	95
9.5	82
4.76	58
2.38	--
2.00	43
1.19	--
0.841	30
0.595	--
0.42	22
0.297	--
0.177	--
0.149	12
0.074	8

M.C.(%): --

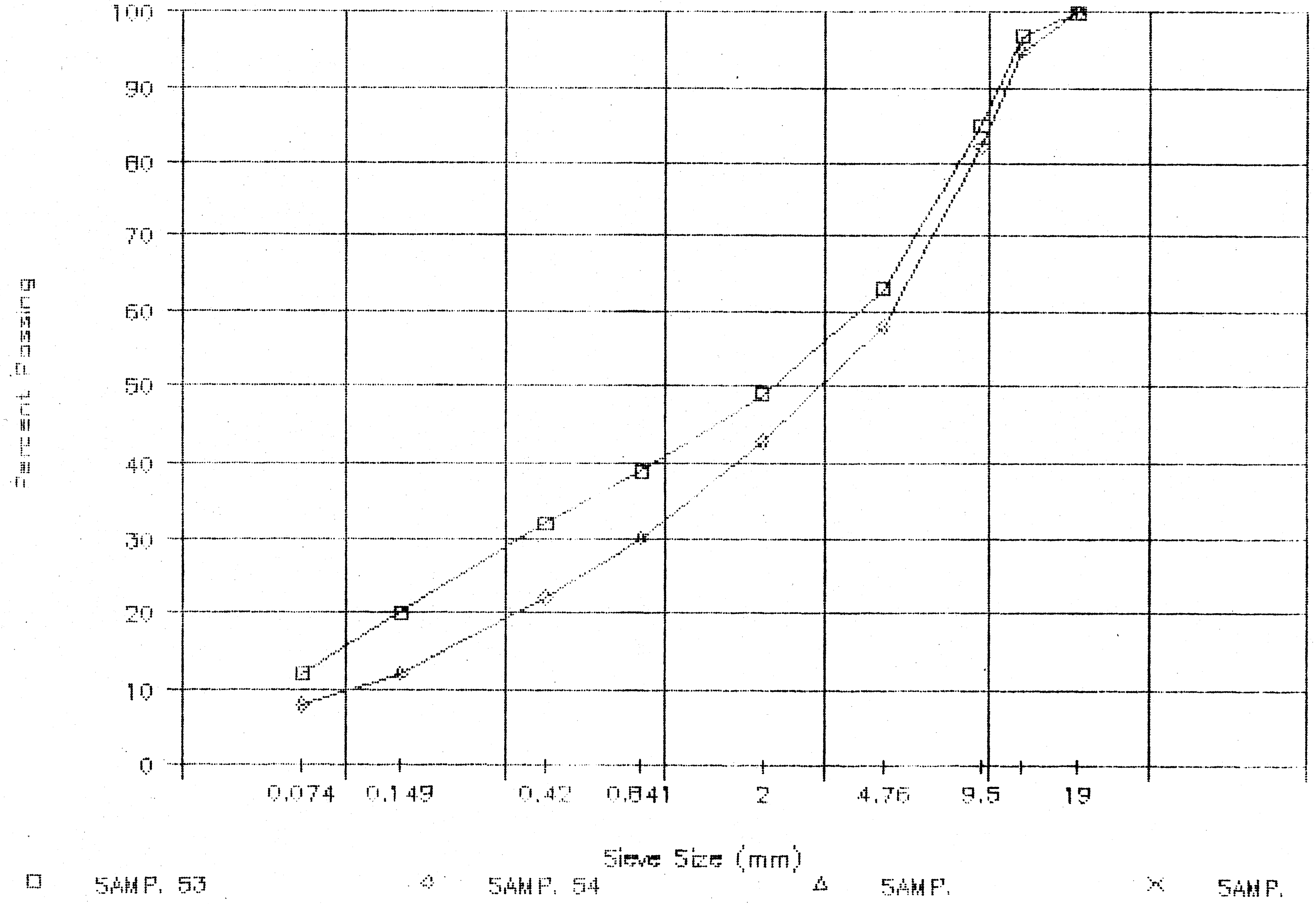
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 42
% SAND: 50
% FINES: 8

CLASSIFICATION:
WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030-240



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-25C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.22

FIELD NO: 55
LAB NO: 2905
DEPTH: 1.2-1.6
TYPE: BULK
CC = 45%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	97
9.5	89
4.76	69
2.38	--
2.00	53
1.19	--
0.841	42
0.595	--
0.42	35
0.297	--
0.177	--
0.149	15
0.074	7

M.C.(%): --

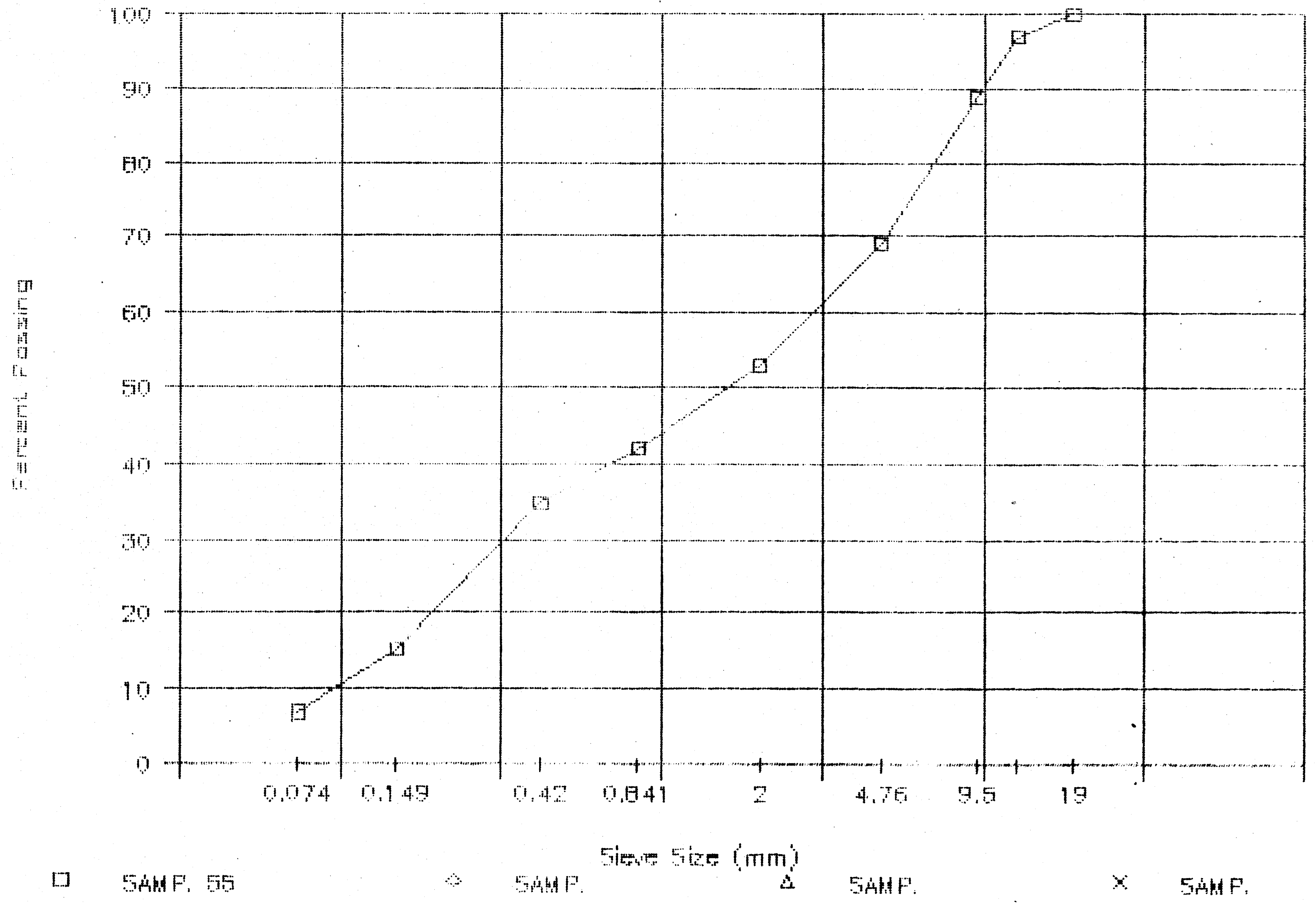
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 31
% SAND: 62
% FINES: 7

CLASSIFICATION:
POORLY GRADED
SAND WITH SILT &
GRAVEL (SP-SM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030-250



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-26C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.22

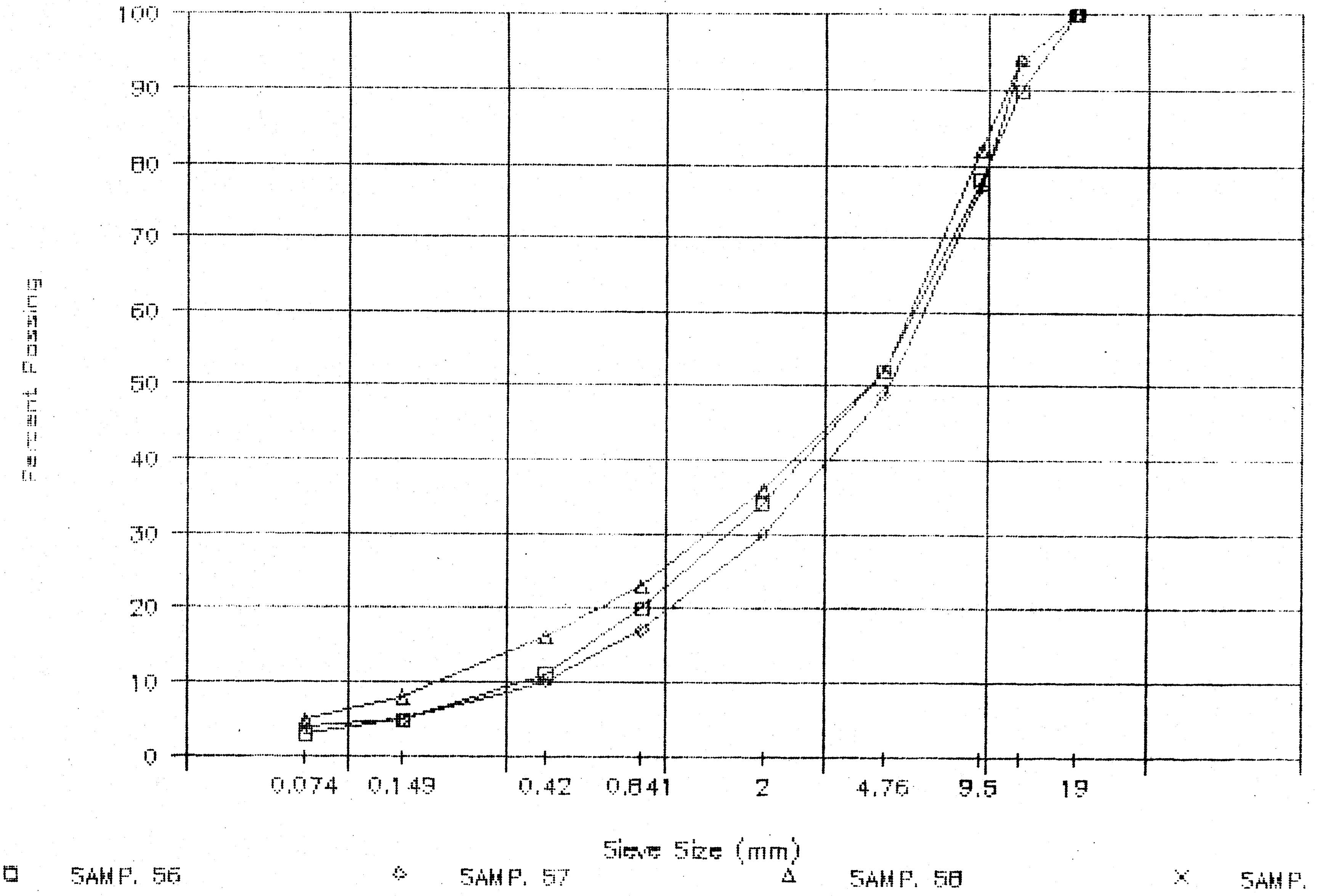
FIELD NO: 56	FIELD NO: 57	FIELD NO: 58
LAB NO: 2906	LAB NO: 2907	LAB NO: 2908
DEPTH: 0.9-1.3	DEPTH: 2.6-3.0	DEPTH: 4.2-4.6
TYPE: BULK	TYPE: BULK	TYPE: BULK
CC = 65%	CC = 62%	CC = 72%

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	--	101.6	--
76.2	--	76.2	--	76.2	--
50.8	--	50.8	--	50.8	--
38.1	--	38.1	--	38.1	--
25.4	--	25.4	--	25.4	--
19.0	100	19.0	100	19.0	100
12.7	90	12.7	94	12.7	94
9.5	78	9.5	77	9.5	82
4.76	52	4.76	49	4.76	52
2.38	--	2.38	--	2.38	--
2.00	34	2.00	30	2.00	36
1.19	--	1.19	--	1.19	--
0.841	20	0.841	17	0.841	23
0.595	--	0.595	--	0.595	--
0.42	11	0.42	10	0.42	16
0.297	--	0.297	--	0.297	--
0.177	--	0.177	--	0.177	--
0.149	5	0.149	5	0.149	8
0.074	3	0.074	4	0.074	5

M.C.(%): --	M.C.(%): --	M.C.(%): --
LIMITS	LIMITS	LIMITS
LIQUID: --	LIQUID: --	LIQUID: --
PLASTIC: --	PLASTIC: --	PLASTIC: --
P.I.: N.P.	P.I.: N.P.	P.I.: N.P.
% GRAVEL: 48	% GRAVEL: 51	% GRAVEL: 48
% SAND: 48	% SAND: 45	% SAND: 47
% FINES: 3	% FINES: 4	% FINES: 5
CLASSIFICATION: WELL-GRADED SAND WITH GRAVEL (SW)	CLASSIFICATION: WELL-GRADED GRAVEL WITH SAND (GW)	CLASSIFICATION: WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030-260



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-27C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.22

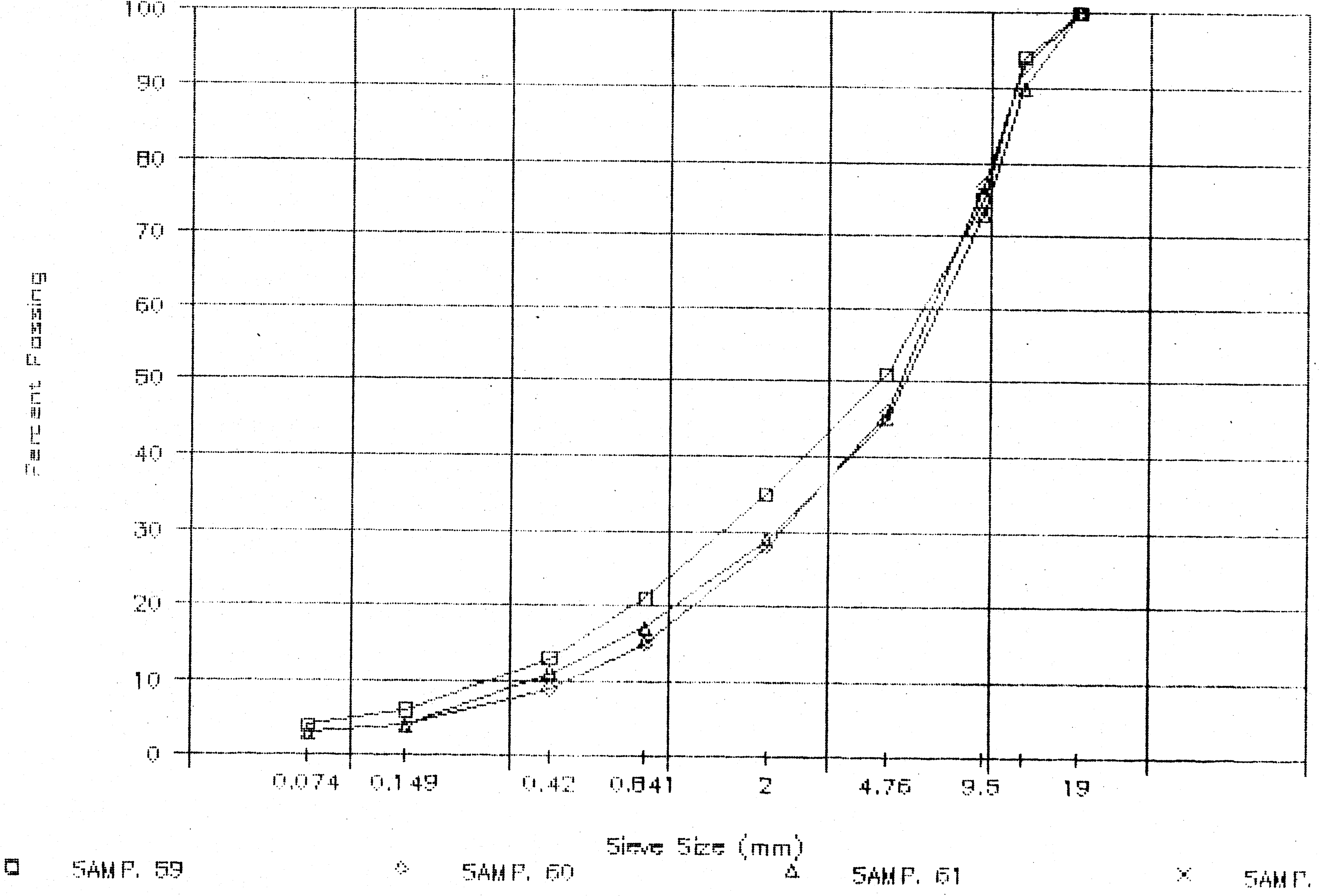
FIELD NO: 59	FIELD NO: 60	FIELD NO: 61
LAB NO: 2909	LAB NO: 2910	LAB NO: 2911
DEPTH: 1.7-2.1	DEPTH: 3.0-3.4	DEPTH: 4.6-5.0
TYPE: BULK	TYPE: BULK	TYPE: BULK
CC = 71%	CC = 72%	CC = 76%

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	--	101.6	--
76.2	--	76.2	--	76.2	--
50.8	--	50.8	--	50.8	--
38.1	--	38.1	--	38.1	--
25.4	--	25.4	--	25.4	--
19.0	100	19.0	100	19.0	100
12.7	94	12.7	93	12.7	90
9.5	75	9.5	77	9.5	73
4.76	51	4.76	46	4.76	45
2.38	--	2.38	--	2.38	--
2.00	35	2.00	28	2.00	29
1.19	--	1.19	--	1.19	--
0.841	21	0.841	15	0.841	17
0.595	--	0.595	--	0.595	--
0.42	13	0.42	9	0.42	11
0.297	--	0.297	--	0.297	--
0.177	--	0.177	--	0.177	--
0.149	6	0.149	4	0.149	4
0.074	4	0.074	3	0.074	3

M.C.(%): --	M.C.(%): --	M.C.(%): --
LIMITS	LIMITS	LIMITS
LIQUID: --	LIQUID: --	LIQUID: --
PLASTIC: --	PLASTIC: --	PLASTIC: --
P.I.: N.P.	P.I.: N.P.	P.I.: N.P.
% GRAVEL: 49	% GRAVEL: 54	% GRAVEL: 55
% SAND: 47	% SAND: 43	% SAND: 42
% FINES: 4	% FINES: 3	% FINES: 3
CLASSIFICATION: WELL-GRADED GRAVEL WITH SAND (GW)	CLASSIFICATION: WELL-GRADED GRAVEL WITH SAND (GW)	CLASSIFICATION: WELL-GRADED GRAVEL WITH SAND (GW)

PUBLIC WORKS CANADA – WHITEHORSE, Y.T.

Grain Size Analysis – Hole 030-270



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-28C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.22

FIELD NO: 62
LAB NO: 2912
DEPTH: 1.6-2.0
TYPE: BULK
CC = 69%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	94
9.5	87
4.76	71
2.38	--
2.00	58
1.19	--
0.841	48
0.595	--
0.42	40
0.297	--
0.177	--
0.149	24
0.074	15

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 29
% SAND: 57
% FINES: 15

CLASSIFICATION:
SILTY SAND WITH GRAVEL (SM)

FIELD NO: 63
LAB NO: 2913
DEPTH: 3.2-3.6
TYPE: BULK
CC = 51%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	96
9.5	85
4.76	69
2.38	--
2.00	57
1.19	--
0.841	49
0.595	--
0.42	43
0.297	--
0.177	--
0.149	33
0.074	20

M.C.(%): --

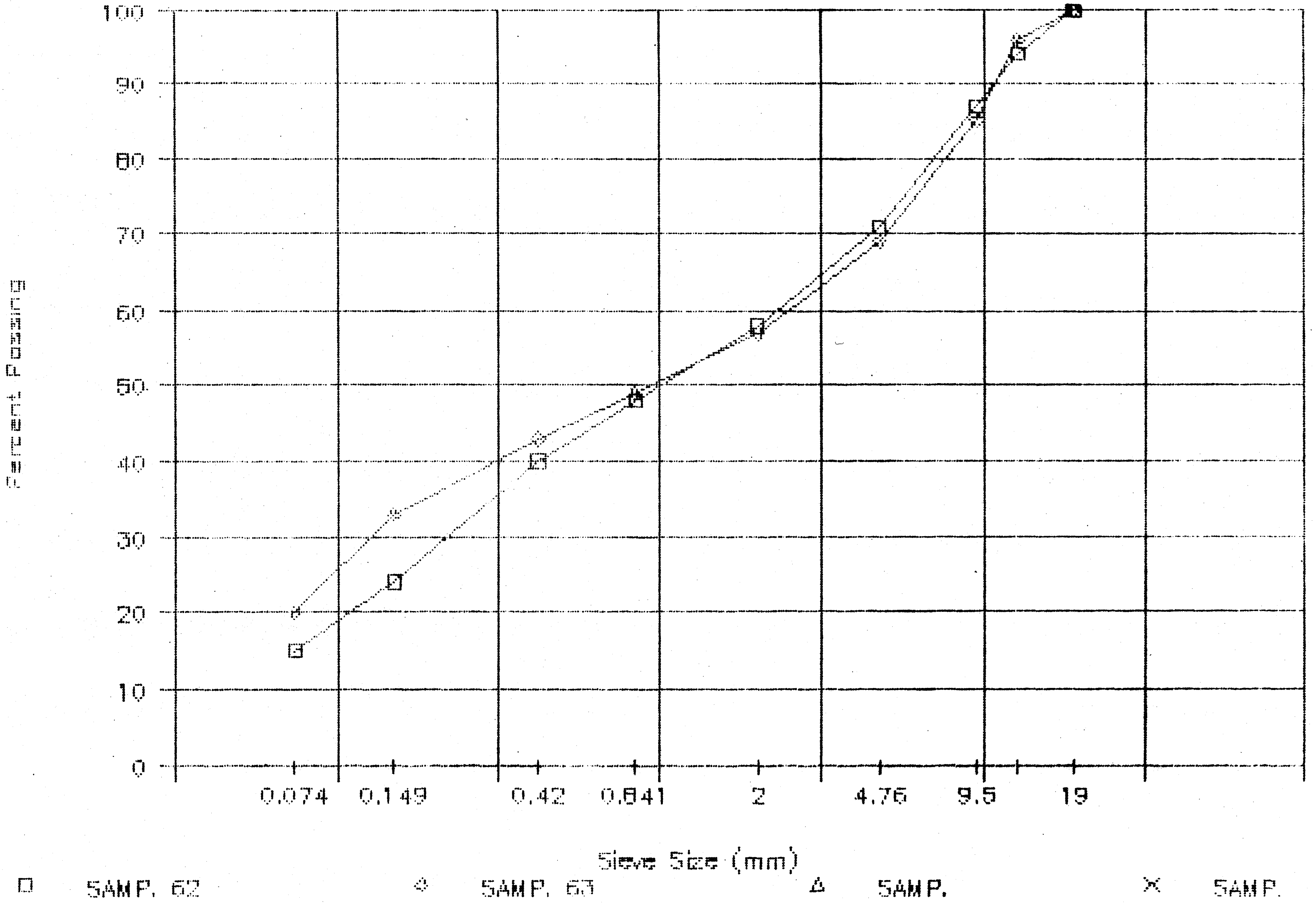
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 31
% SAND: 49
% FINES: 20

CLASSIFICATION:
SILTY SAND WITH GRAVEL (SM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030-28C



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-29C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: DT DATE COMPLETED: 88.10.22

FIELD NO: 64
LAB NO: 2914
DEPTH: 2.0-2.4
TYPE: ERR
CC = 76%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	92
9.5	73
4.76	40
2.38	--
2.00	24
1.19	--
0.841	14
0.595	--
0.42	9
0.297	--
0.177	--
0.149	4
0.074	3

M.C.(%): --

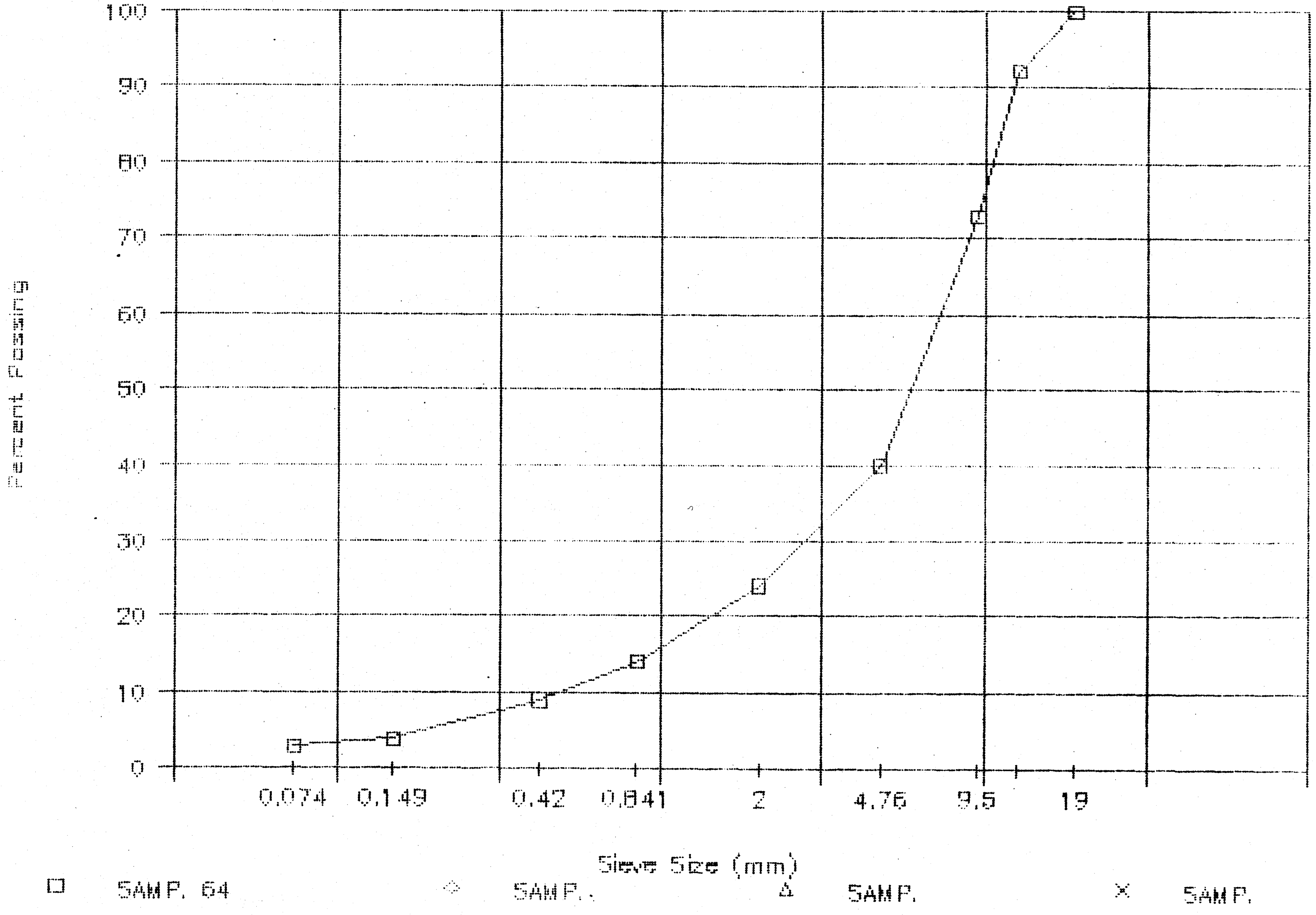
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 60
% SAND: 38
% FINES: 3

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030-29C



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-30C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: CB DATE COMPLETED: 88.10.22

FIELD NO: 65
LAB NO: 2915
DEPTH: 2.6-3.0
TYPE: BULK
CC = 71%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	93
9.5	84
4.76	62
2.38	--
2.00	46
1.19	--
0.841	31
0.595	--
0.42	22
0.297	--
0.177	--
0.149	9
0.074	5

M.C.(%): --

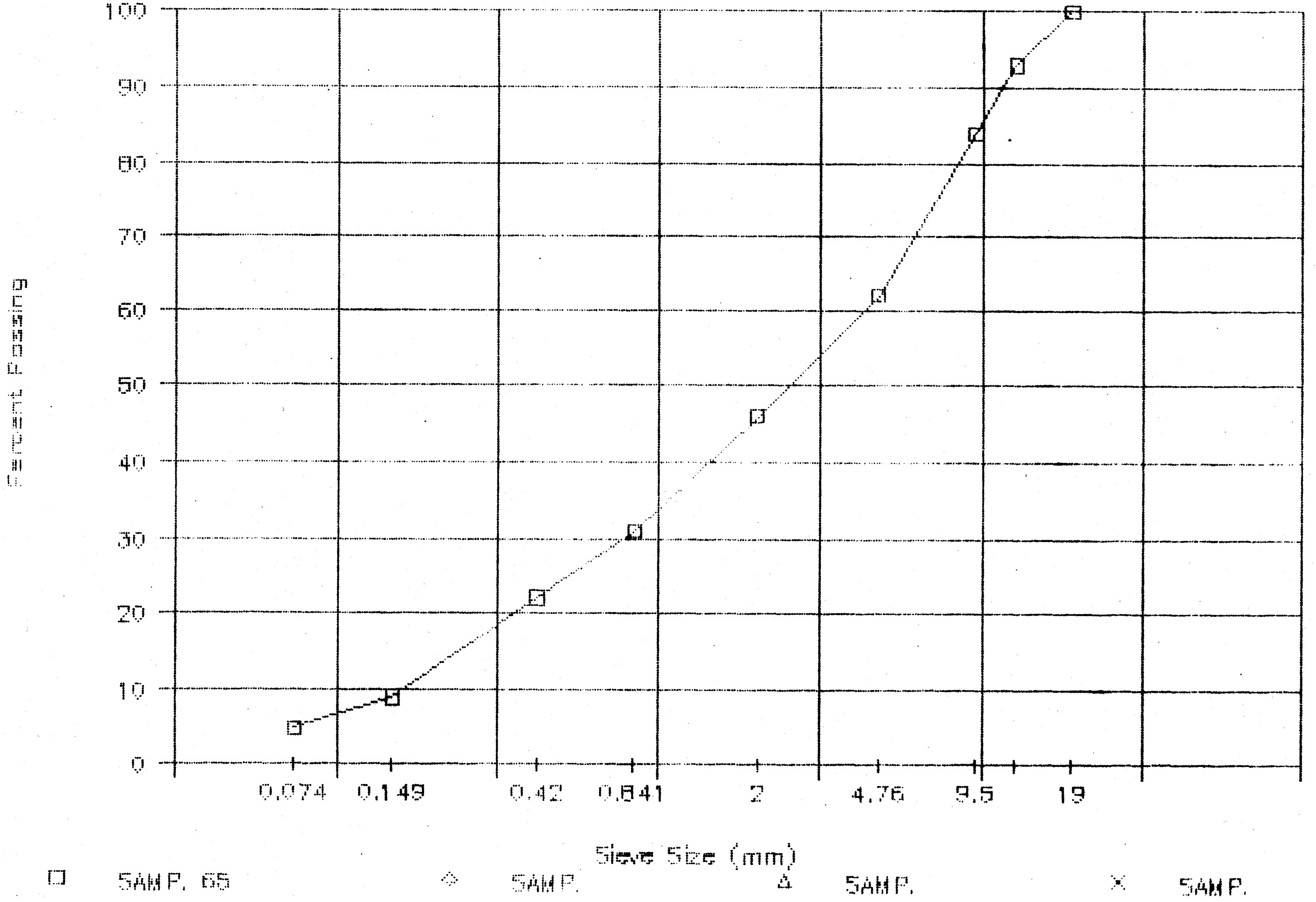
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 38
% SAND: 57
% FINES: 5

CLASSIFICATION:
POORLY GRADED SAND WITH SILT & GRAVEL (SP-SM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030-30C



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-31C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: CB DATE COMPLETED: 88.10.22

FIELD NO: 66
LAB NO: 2916
DEPTH: 1.2-1.6
TYPE: BULK
CC = 78%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	98
9.5	85
4.76	53
2.38	--
2.00	33
1.19	--
0.841	19
0.595	--
0.42	12
0.297	--
0.177	--
0.149	5
0.074	3

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 47
% SAND: 50
% FINES: 3

CLASSIFICATION:
WELL-GRADED SAND WITH GRAVEL (SW)

FIELD NO: 67
LAB NO: 2917
DEPTH: 2.6-3.0
TYPE: BULK
CC = 78%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	92
9.5	82
4.76	57
2.38	--
2.00	41
1.19	--
0.841	30
0.595	--
0.42	21
0.297	--
0.177	--
0.149	9
0.074	5

M.C.(%): --

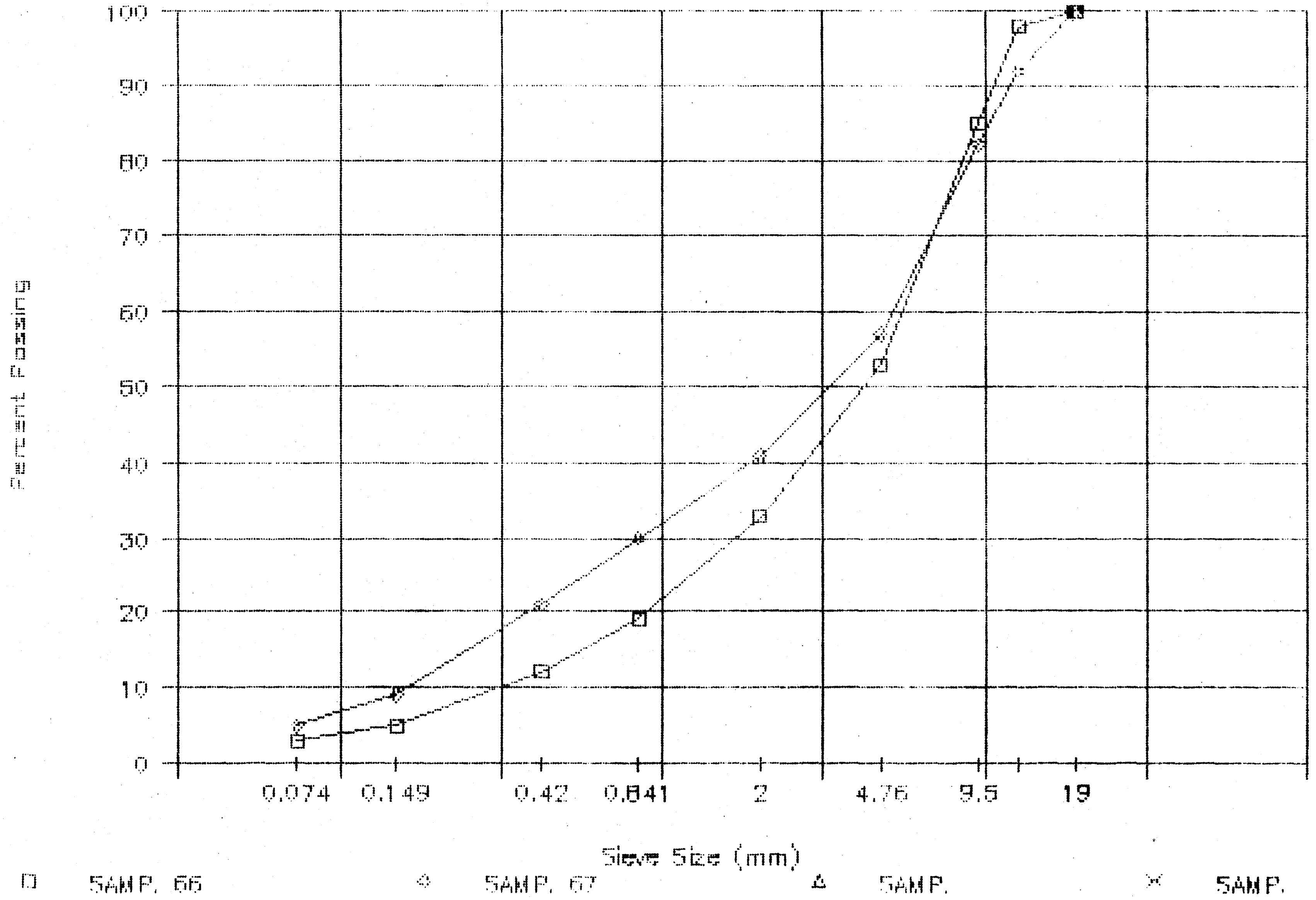
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 43
% SAND: 51
% FINES: 5

CLASSIFICATION:
POORLY GRADED SAND WITH SILT & GRAVEL (SP-SM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030-31C



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-32C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: CB DATE COMPLETED: 88.10.23

FIELD NO: 68
LAB NO: 2918
DEPTH: 2.4-2.8
TYPE: BULK
CC = 75%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	97
9.5	84
4.76	62
2.38	--
2.00	46
1.19	--
0.841	33
0.595	--
0.42	24
0.297	--
0.177	--
0.149	13
0.074	9

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 38
% SAND: 53
% FINES: 9

CLASSIFICATION:
WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)

FIELD NO: 69
LAB NO: 2919
DEPTH: 3.8-4.2
TYPE: BULK
CC = 79%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	90
9.5	76
4.76	53
2.38	--
2.00	37
1.19	--
0.841	26
0.595	--
0.42	19
0.297	--
0.177	--
0.149	10
0.074	7

M.C.(%): --

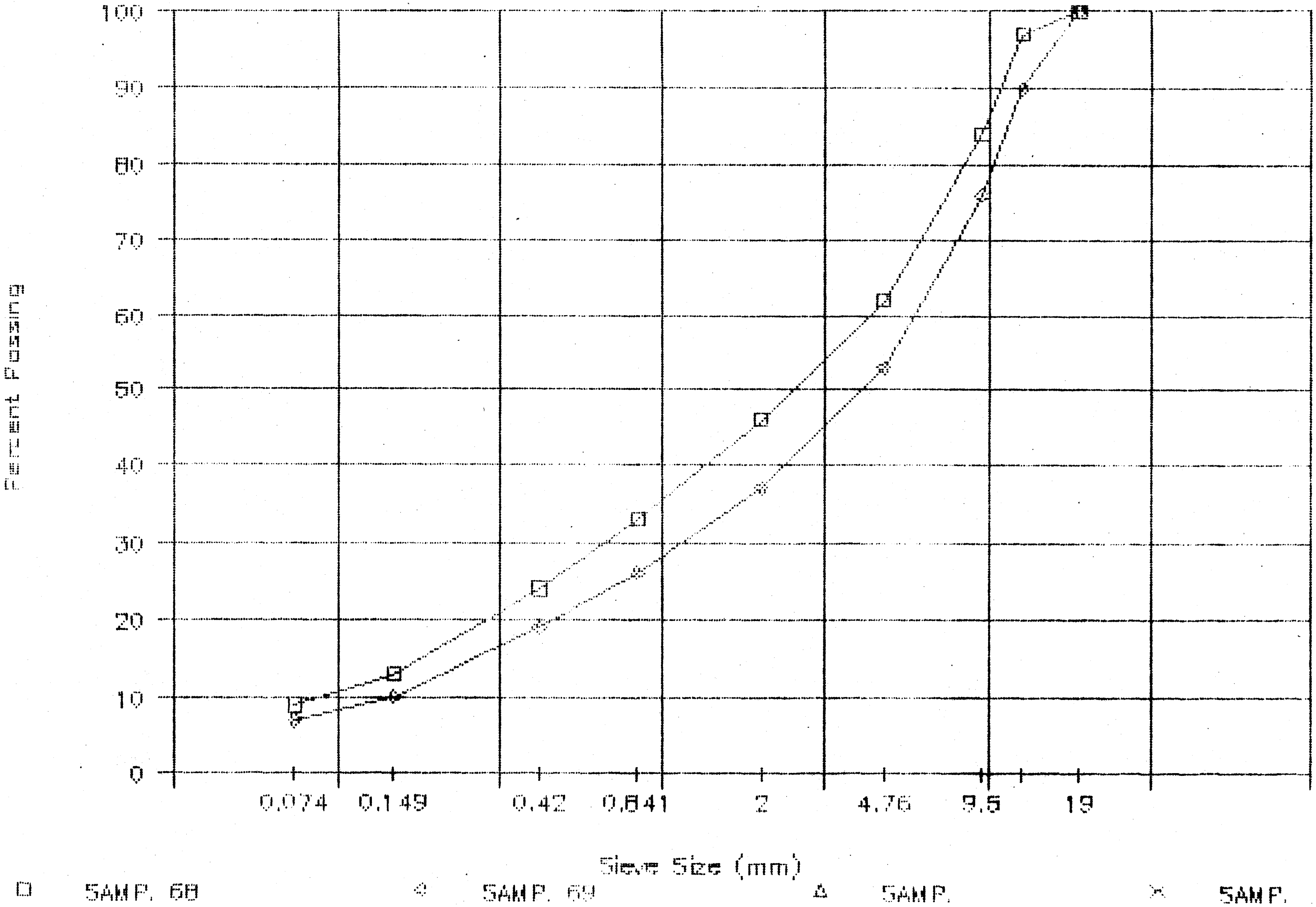
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 47
% SAND: 46
% FINES: 7

CLASSIFICATION:
WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030—320



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-33C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: CB DATE COMPLETED: 88.10.23

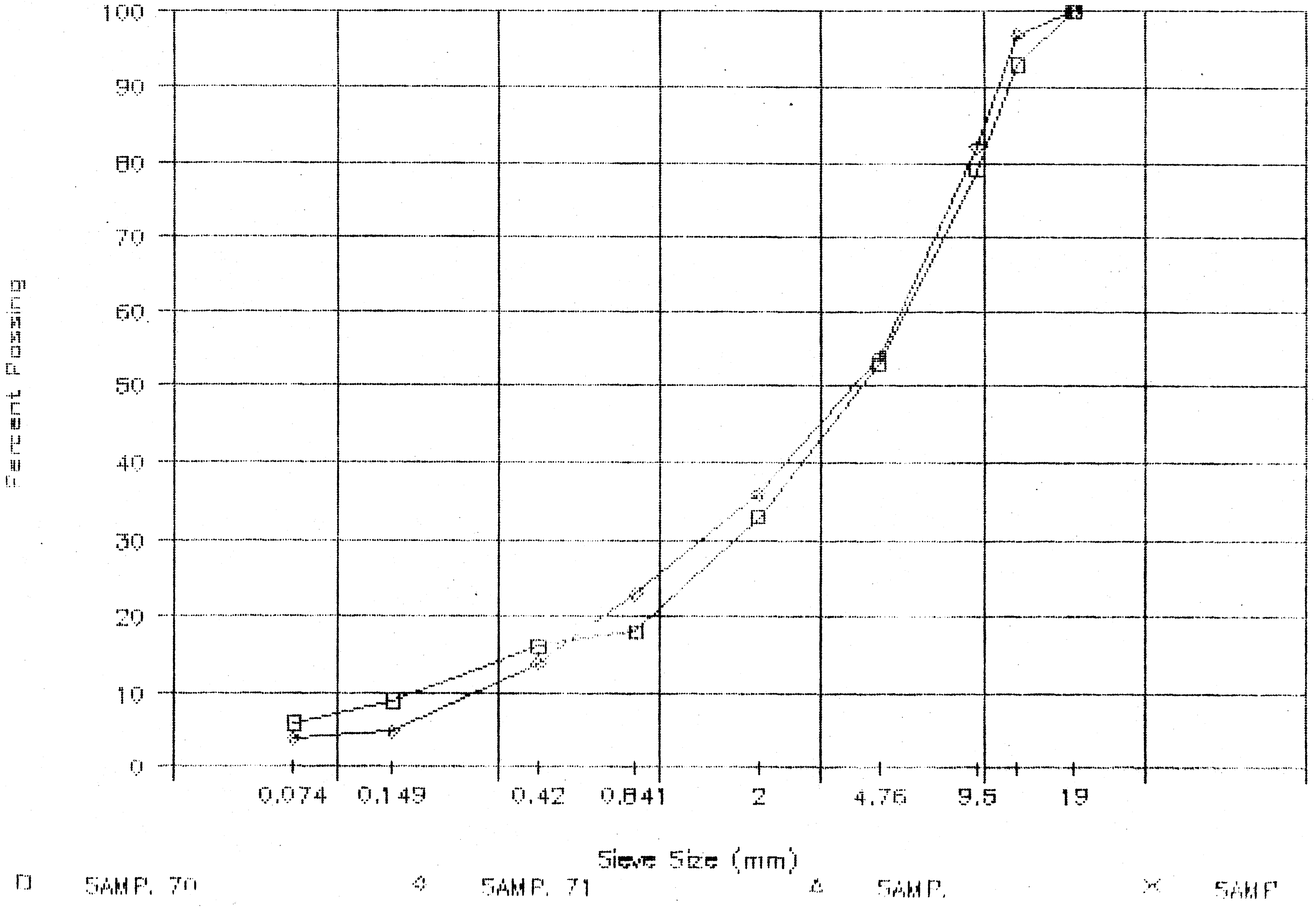
FIELD NO: 70 LAB NO: 2920 DEPTH: 0.8-1.2 TYPE: BULK CC = 72%	FIELD NO: 71 LAB NO: 2921 DEPTH: 2.2-2.6 TYPE: BULK CC = 84%

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	--
76.2	--	76.2	--
50.8	--	50.8	--
38.1	--	38.1	--
25.4	--	25.4	--
19.0	100	19.0	100
12.7	93	12.7	97
9.5	79	9.5	82
4.76	53	4.76	54
2.38	--	2.38	--
2.00	33	2.00	36
1.19	--	1.19	--
0.841	18	0.841	23
0.595	--	0.595	--
0.42	16	0.42	14
0.297	--	0.297	--
0.177	--	0.177	--
0.149	9	0.149	5
0.074	6	0.074	4

M.C.(%): --	M.C.(%): --
LIMITS LIQUID: -- PLASTIC: -- P.I.: N.P.	LIMITS LIQUID: -- PLASTIC: -- P.I.: N.P.
% GRAVEL: 47 % SAND: 47 % FINES: 6	% GRAVEL: 46 % SAND: 50 % FINES: 4
CLASSIFICATION: WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	CLASSIFICATION: WELL-GRADED SAND WITH GRAVEL (SW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030–330



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-34C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: CB DATE COMPLETED: 88.10.23

FIELD NO: 72
LAB NO: 2922
DEPTH: 1.6-2.0
TYPE: BULK
CC = 72%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	96
9.5	81
4.76	53
2.38	--
2.00	35
1.19	--
0.841	23
0.595	--
0.42	14
0.297	--
0.177	--
0.149	6
0.074	4

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 47
% SAND: 48
% FINES: 4

CLASSIFICATION:
WELL-GRADED SAND WITH GRAVEL (SW)

FIELD NO: 73
LAB NO: 2923
DEPTH: 3.2-3.6
TYPE: BULK
CC = 70%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	92
9.5	78
4.76	49
2.38	--
2.00	29
1.19	--
0.841	17
0.595	--
0.42	10
0.297	--
0.177	--
0.149	5
0.074	3

M.C.(%): --

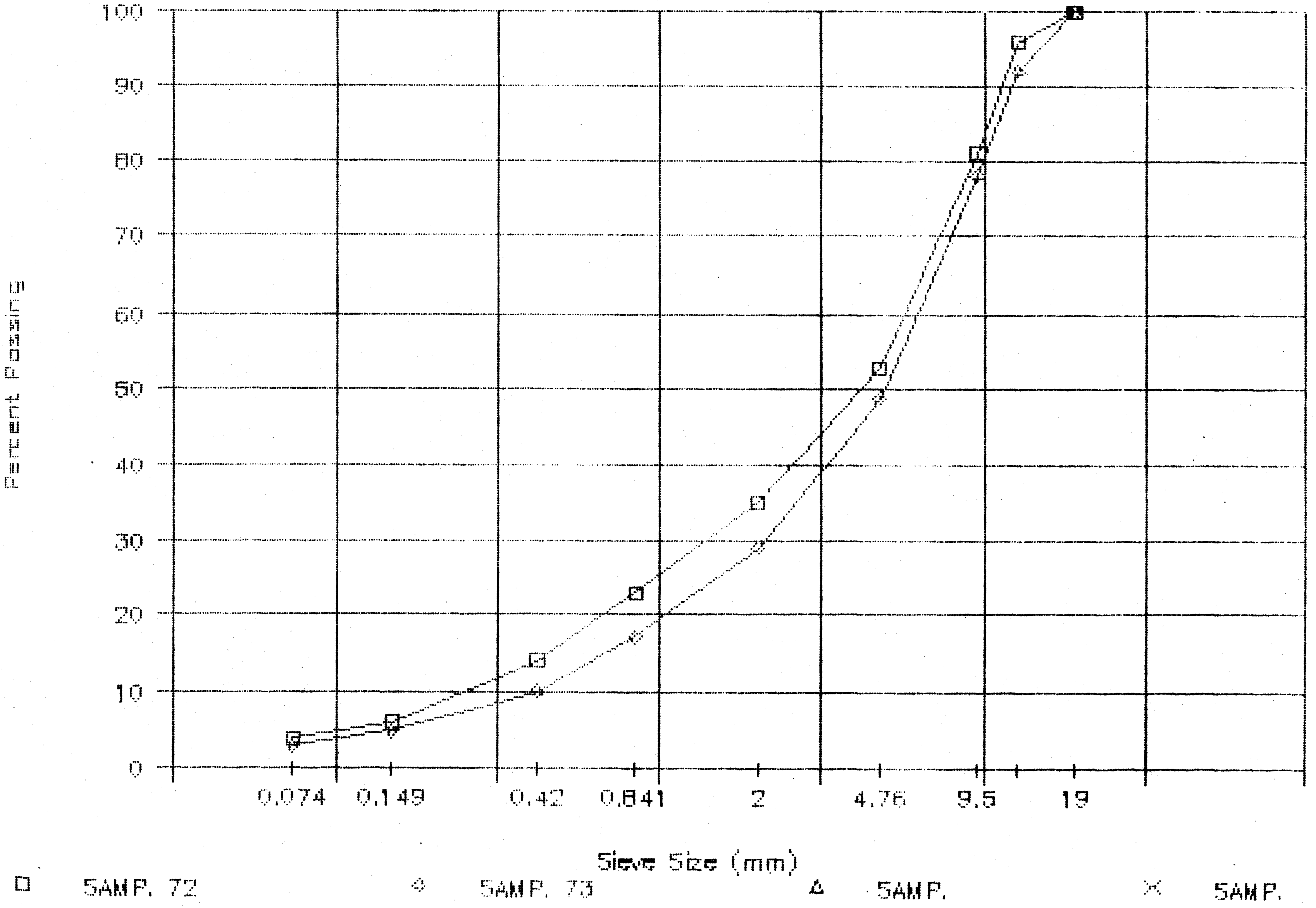
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 51
% SAND: 45
% FINES: 3

CLASSIFICATION:
WELL-GRADED GRAVEL WITH SAND (GW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030-34C



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-35C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: CB DATE COMPLETED: 88.10.23

FIELD NO: 74
LAB NO: 2924
DEPTH: 1.6-2.0
TYPE: BULK
CC = 74%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	94
9.5	79
4.76	55
2.38	--
2.00	36
1.19	--
0.841	21
0.595	--
0.42	13
0.297	--
0.177	--
0.149	5
0.074	3

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 45
% SAND: 51
% FINES: 3

CLASSIFICATION:
WELL-GRADED SAND WITH GRAVEL (SW)

FIELD NO: 75
LAB NO: 2925
DEPTH: 3.2-3.6
TYPE: BULK
CC = 79%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	95
9.5	80
4.76	48
2.38	--
2.00	29
1.19	--
0.841	18
0.595	--
0.42	12
0.297	--
0.177	--
0.149	6
0.074	5

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 52
% SAND: 44
% FINES: 5

CLASSIFICATION:
WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)

FIELD NO: 76
LAB NO: 2926
DEPTH: 4.2-4.6
TYPE: BULK
CC = 90%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	94
9.5	74
4.76	44
2.38	--
2.00	29
1.19	--
0.841	19
0.595	--
0.42	13
0.297	--
0.177	--
0.149	6
0.074	4

M.C.(%): --

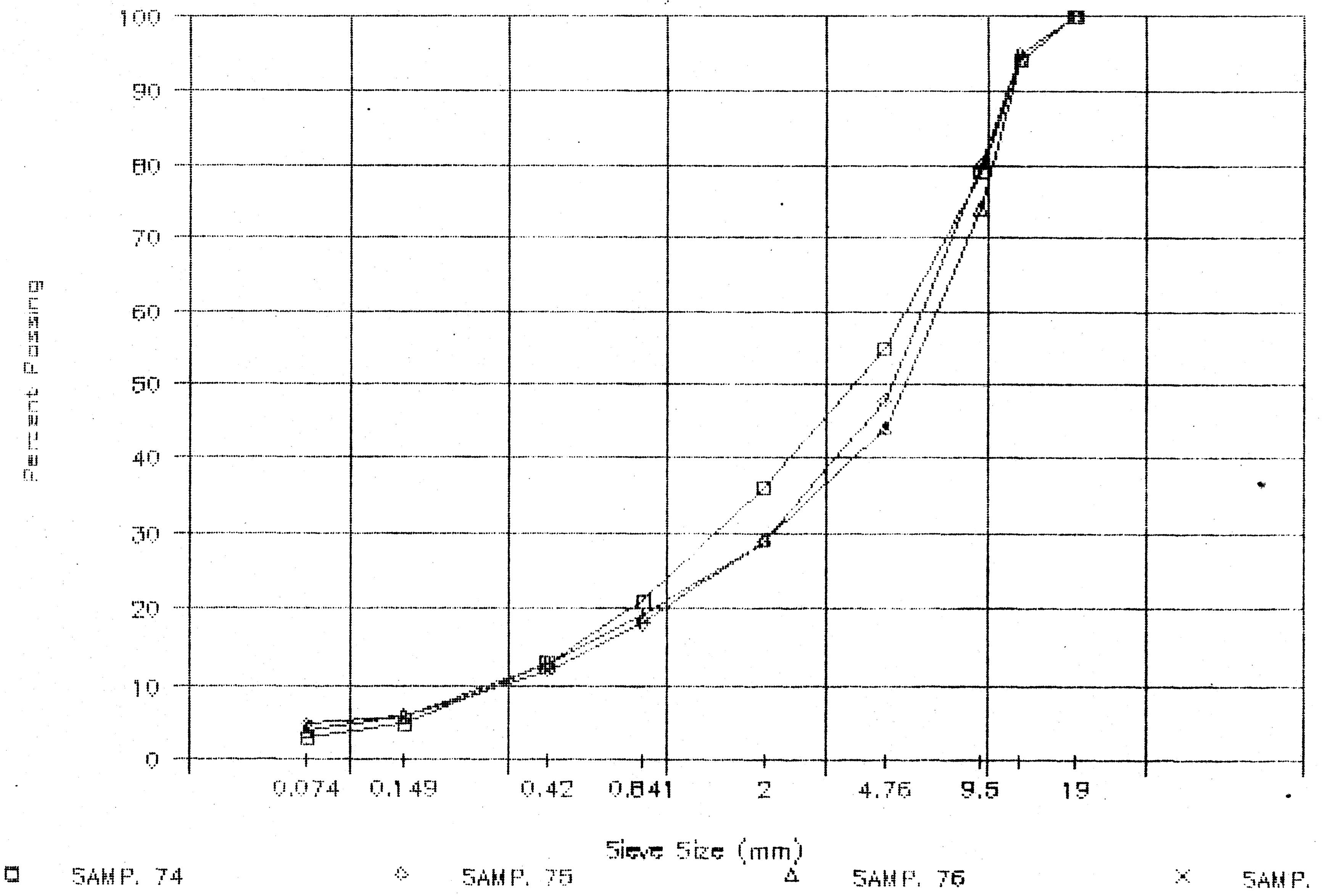
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 56
% SAND: 41
% FINES: 4

CLASSIFICATION:
WELL-GRADED GRAVEL WITH SAND (GW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030-350

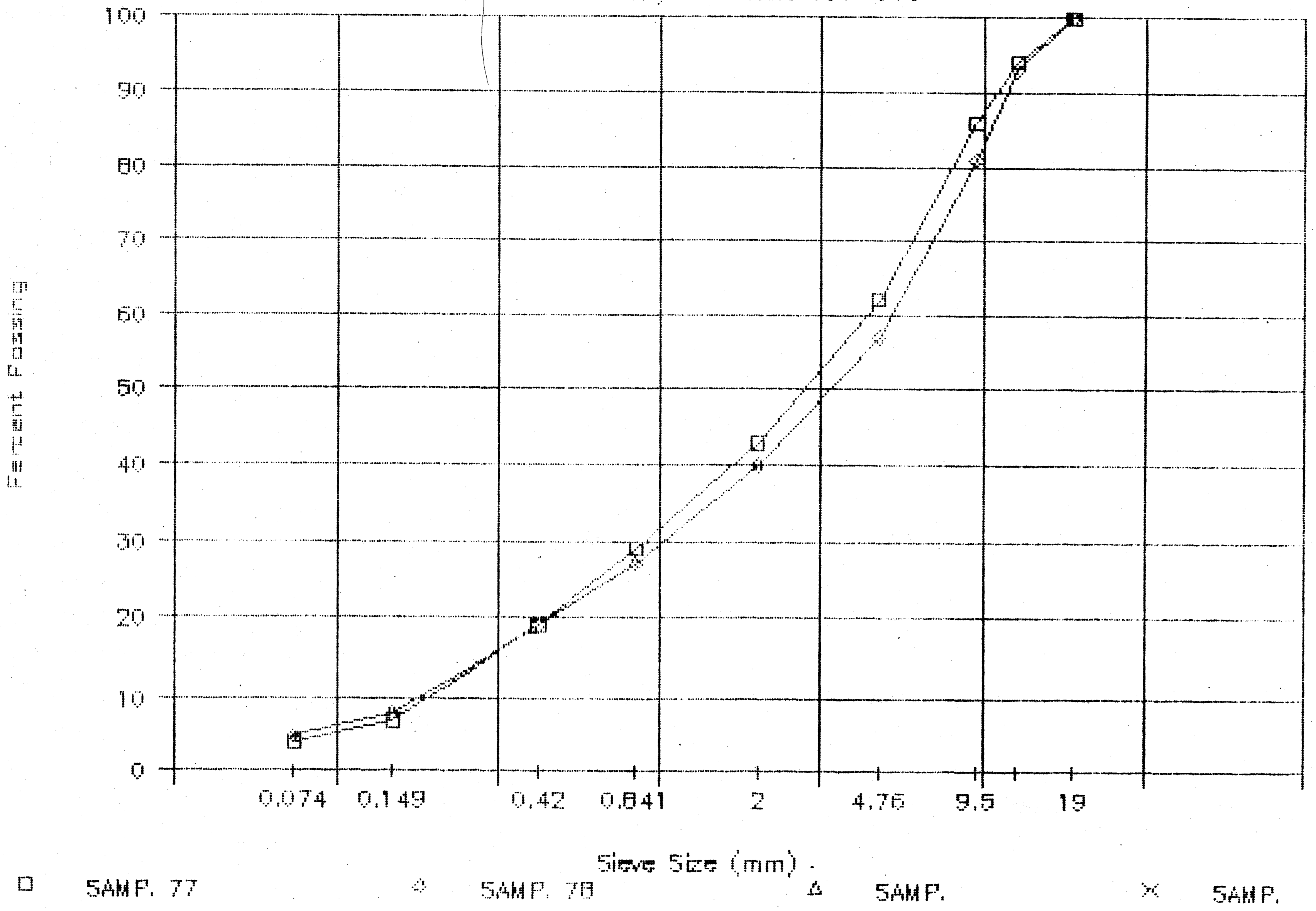


```
 PROJECT NUMBER:    115-G-04                HOLE NUMBER:     030-36C
 CLIENT:            PWC CAPITAL - Y.T.
 PROJECT NAME:      ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION:  A/H KM 1749.5 LHS
 DRILL UNIT:        CAT 225 HOE
 HOLE LOCATION:     SEE PLAN
 LOGGED BY:         CB                      DATE COMPLETED:  88.10.23

 FIELD NO:       77 ¦ FIELD NO:       78 ¦
 LAB NO:  2927      ¦ LAB NO:  2928      ¦
 DEPTH:   2.6-3.0   ¦ DEPTH:   4.0-4.4   ¦
 TYPE:    BULK      ¦ TYPE:    BULK      ¦
 CC = 66%           ¦ CC = 71%           ¦
                    ¦                    ¦
 SIEVE   ¦PERCENT   ¦ SIEVE   ¦PERCENT   ¦
 SIZE    ¦PASSING   ¦ SIZE    ¦PASSING   ¦
 ----------------   ¦ ----------------   ¦
 101.6   ¦   --     ¦ 101.6   ¦   --     ¦
  76.2   ¦   --     ¦  76.2   ¦   --     ¦
  50.8   ¦   --     ¦  50.8   ¦   --     ¦
  38.1   ¦   --     ¦  38.1   ¦   --     ¦
  25.4   ¦   --     ¦  25.4   ¦   --     ¦
  19.0   ¦  100     ¦  19.0   ¦  100     ¦
  12.7   ¦   94     ¦  12.7   ¦   93     ¦
   9.5   ¦   86     ¦   9.5   ¦   81     ¦
   4.76  ¦   62     ¦   4.76  ¦   57     ¦
   2.38  ¦   --     ¦   2.38  ¦   --     ¦
   2.00  ¦   43     ¦   2.00  ¦   40     ¦
   1.19  ¦   --     ¦   1.19  ¦   --     ¦
   0.841 ¦   29     ¦   0.841 ¦   27     ¦
   0.595 ¦   --     ¦   0.595 ¦   --     ¦
   0.42  ¦   19     ¦   0.42  ¦   19     ¦
   0.297 ¦   --     ¦   0.297 ¦   --     ¦
   0.177 ¦   --     ¦   0.177 ¦   --     ¦
   0.149 ¦   7      ¦   0.149 ¦   8      ¦
   0.074 ¦   4      ¦   0.074 ¦   5      ¦
                    ¦                    ¦
 M.C.(%):     --    ¦ M.C.(%):     --    ¦
                    ¦                    ¦
      LIMITS        ¦      LIMITS        ¦
 LIQUID:      --    ¦ LIQUID:      --    ¦
 PLASTIC:     --    ¦ PLASTIC:     --    ¦
 P.I.:       N.P.   ¦ P.I.:       N.P.   ¦
                    ¦                    ¦
 % GRAVEL:      38  ¦ % GRAVEL:      43  ¦
 % SAND:        58  ¦ % SAND:        52  ¦
 % FINES:        4  ¦ % FINES:        5  ¦
                    ¦                    ¦
 CLASSIFICATION:    ¦ CLASSIFICATION:    ¦
 POORLY GRADED      ¦ WELL-GRADED SAND   ¦
 SAND WITH GRAVEL   ¦ WITH SILT &        ¦
 (SP)               ¦ GRAVEL (SW-SM)     ¦
```

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030-360



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-37C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: CB DATE COMPLETED: 88.10.23

FIELD NO: 79
LAB NO: 2929
DEPTH: 1.4-1.8
TYPE: BULK
CC = 78%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	90
9.5	75
4.76	46
2.38	--
2.00	29
1.19	--
0.841	18
0.595	--
0.42	12
0.297	--
0.177	--
0.149	6
0.074	4

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 54
% SAND: 42
% FINES: 4

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

FIELD NO: 80
LAB NO: 2930
DEPTH: 3.0-3.4
TYPE: BULK
CC = 77%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	91
9.5	77
4.76	49
2.38	--
2.00	33
1.19	--
0.841	19
0.595	--
0.42	12
0.297	--
0.177	--
0.149	6
0.074	4

M.C.(%): --

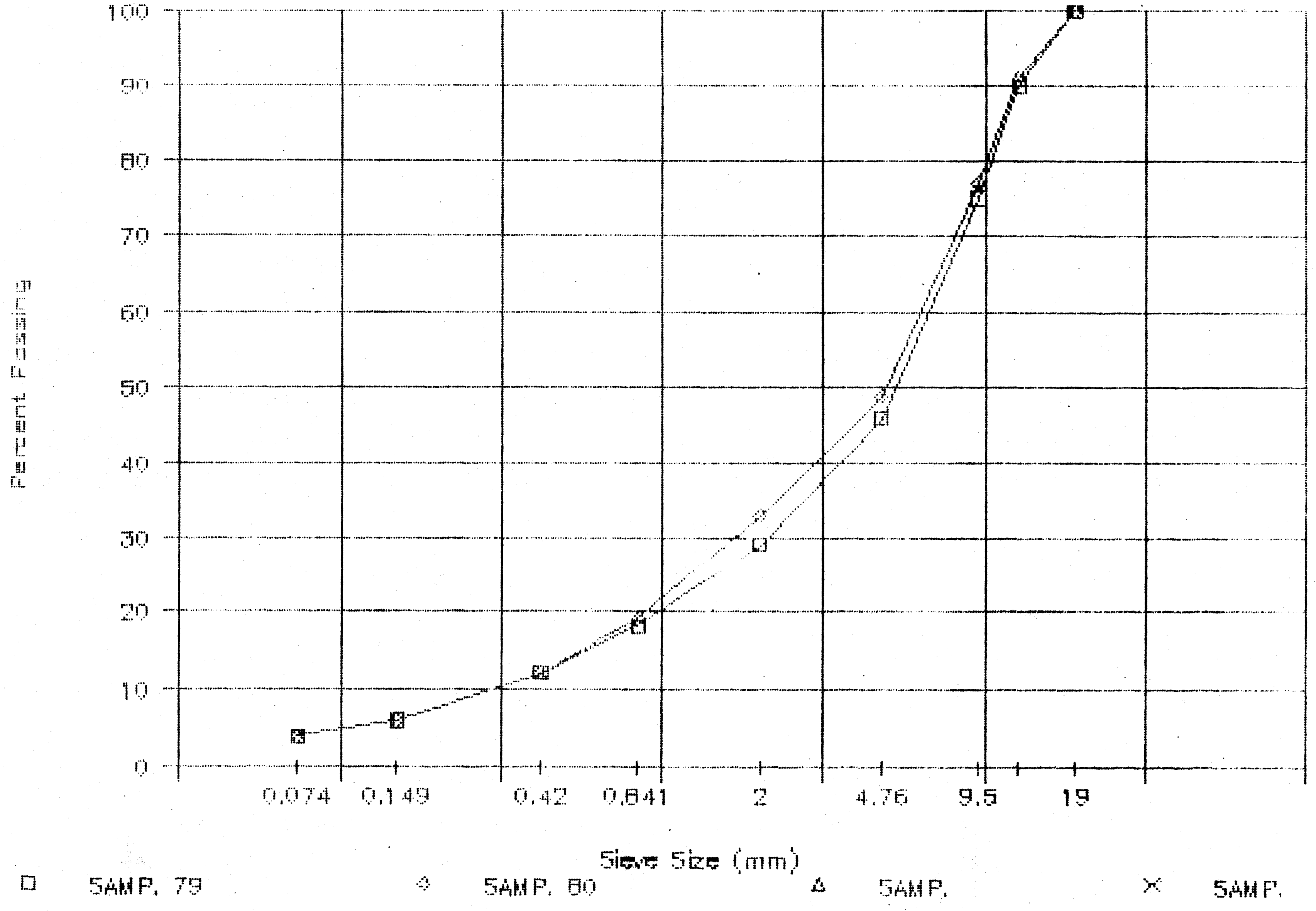
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 51
% SAND: 45
% FINES: 4

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030-37C



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-38C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: CB DATE COMPLETED: 88.10.23

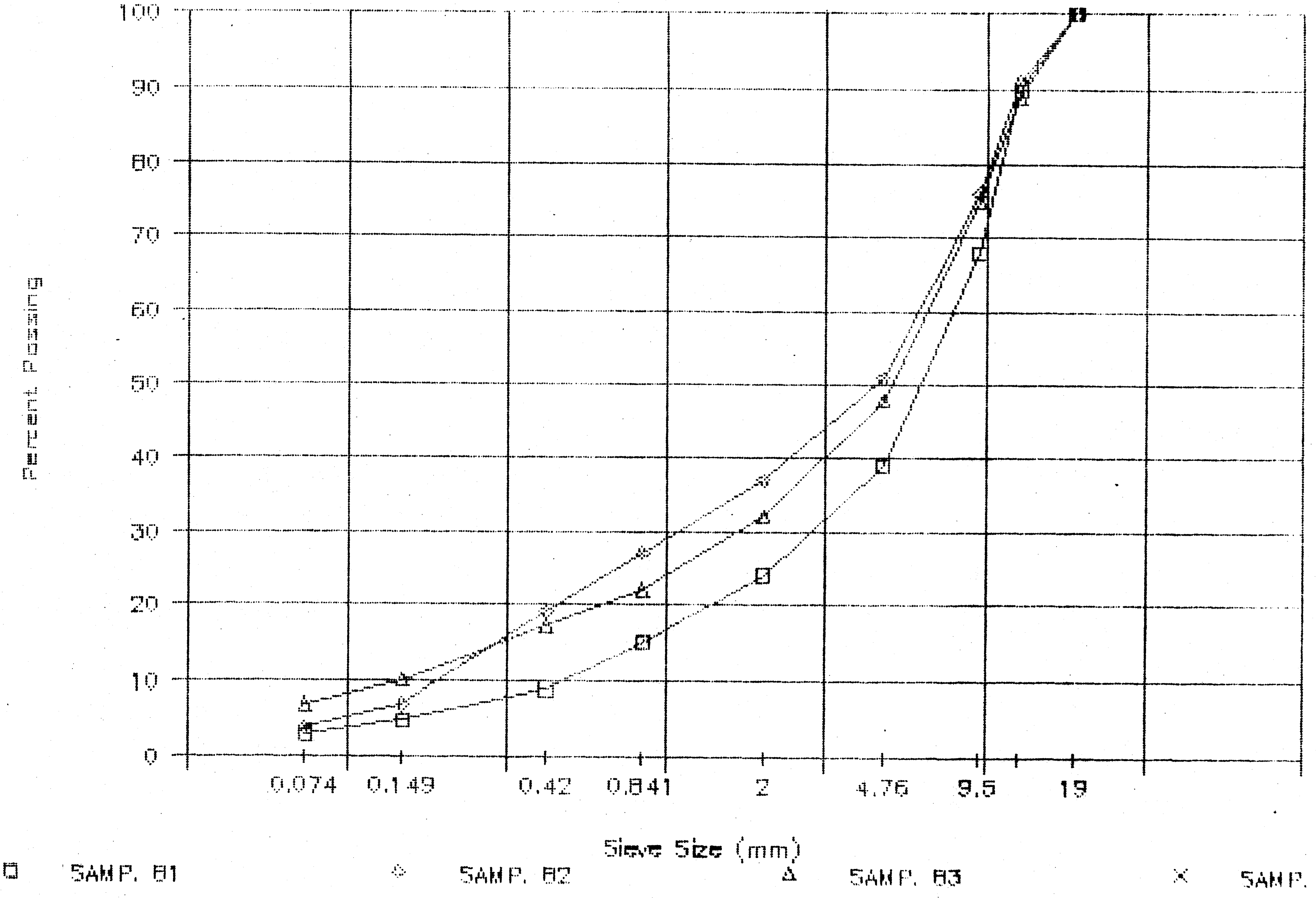
FIELD NO: 81	FIELD NO: 82	FIELD NO: 83
LAB NO: 2931	LAB NO: 2932	LAB NO: 2933
DEPTH: 1.4-1.8	DEPTH: 2.4-2.8	DEPTH: 4.4-4.8
TYPE: BULK	TYPE: BULK	TYPE: BULK
CC = 83%	CC = 85%	CC = 80%

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	--	101.6	--
76.2	--	76.2	--	76.2	--
50.8	--	50.8	--	50.8	--
38.1	--	38.1	--	38.1	--
25.4	--	25.4	--	25.4	--
19.0	100	19.0	100	19.0	100
12.7	90	12.7	91	12.7	89
9.5	68	9.5	76	9.5	75
4.76	39	4.76	51	4.76	48
2.38	--	2.38	--	2.38	--
2.00	24	2.00	37	2.00	32
1.19	--	1.19	--	1.19	--
0.841	15	0.841	27	0.841	22
0.595	--	0.595	--	0.595	--
0.42	9	0.42	19	0.42	17
0.297	--	0.297	--	0.297	--
0.177	--	0.177	--	0.177	--
0.149	5	0.149	7	0.149	10
0.074	3	0.074	4	0.074	7

M.C.(%): --	M.C.(%): --	M.C.(%): --
LIMITS	LIMITS	LIMITS
LIQUID: --	LIQUID: --	LIQUID: --
PLASTIC: --	PLASTIC: --	PLASTIC: --
P.I.: N.P.	P.I.: N.P.	P.I.: N.P.
% GRAVEL: 61	% GRAVEL: 49	% GRAVEL: 52
% SAND: 36	% SAND: 47	% SAND: 41
% FINES: 3	% FINES: 4	% FINES: 7
CLASSIFICATION: WELL-GRADED GRAVEL WITH SAND (GW)	CLASSIFICATION: WELL-GRADED GRAVEL WITH SAND (GW)	CLASSIFICATION: WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030-38C



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-39C
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: CB DATE COMPLETED: 88.10.23

FIELD NO: 84
LAB NO: 2934
DEPTH: 1.6-2.0
TYPE: BULK
CC = 79%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	90
9.5	77
4.76	50
2.38	--
2.00	35
1.19	--
0.841	21
0.595	--
0.42	11
0.297	--
0.177	--
0.149	4
0.074	3

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 50
% SAND: 48
% FINES: 3

CLASSIFICATION:
POORLY GRADED GRAVEL WITH SAND (GP)

FIELD NO: 85
LAB NO: 2935
DEPTH: 3.4-3.8
TYPE: BULK
CC = 70%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	93
9.5	81
4.76	57
2.38	--
2.00	41
1.19	--
0.841	29
0.595	--
0.42	20
0.297	--
0.177	--
0.149	10
0.074	7

M.C.(%): --

LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 43
% SAND: 50
% FINES: 7

CLASSIFICATION:
WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)

FIELD NO: 86
LAB NO: 2936
DEPTH: 4.8-5.2
TYPE: BULK
CC = 60%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	97
9.5	87
4.76	61
2.38	--
2.00	44
1.19	--
0.841	31
0.595	--
0.42	22
0.297	--
0.177	--
0.149	11
0.074	8

M.C.(%): --

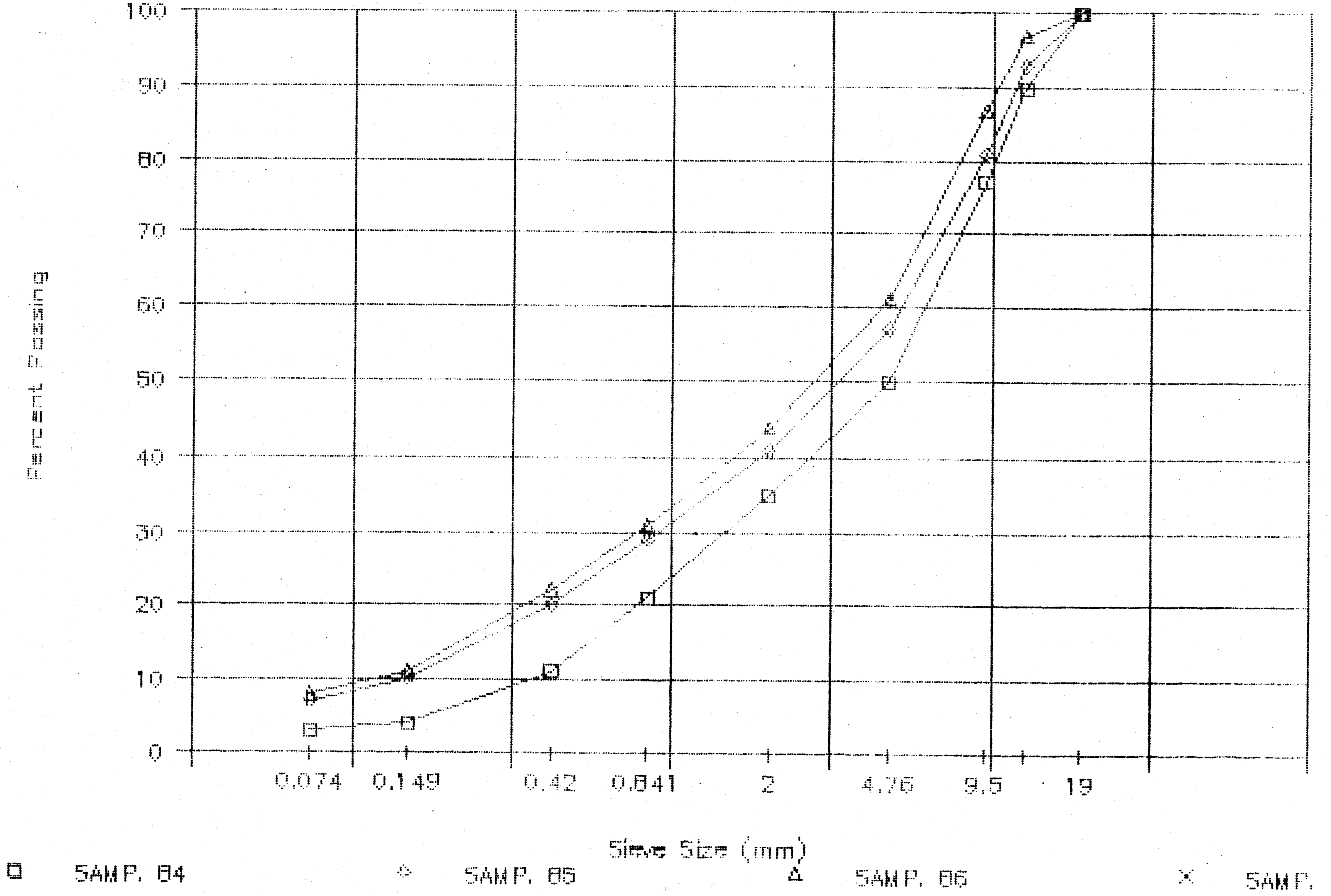
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 39
% SAND: 54
% FINES: 8

CLASSIFICATION:
WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 030--390



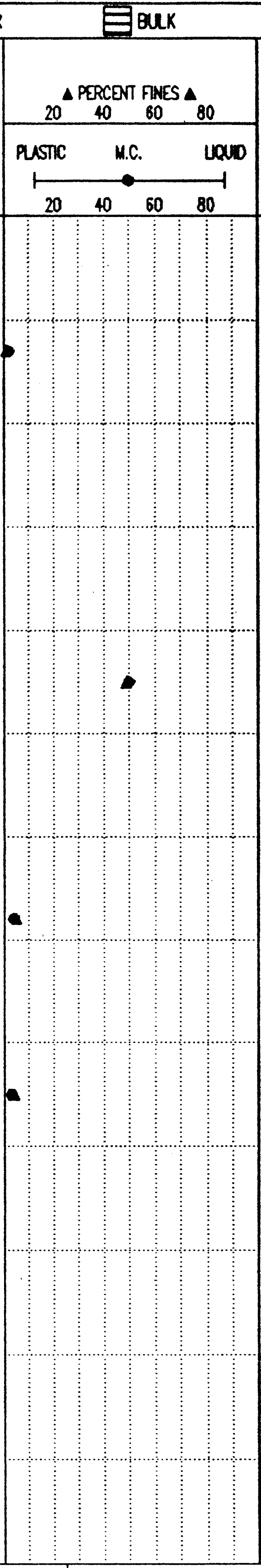
Pit 115 G-04
Km 1750 LHS Alaska Highway

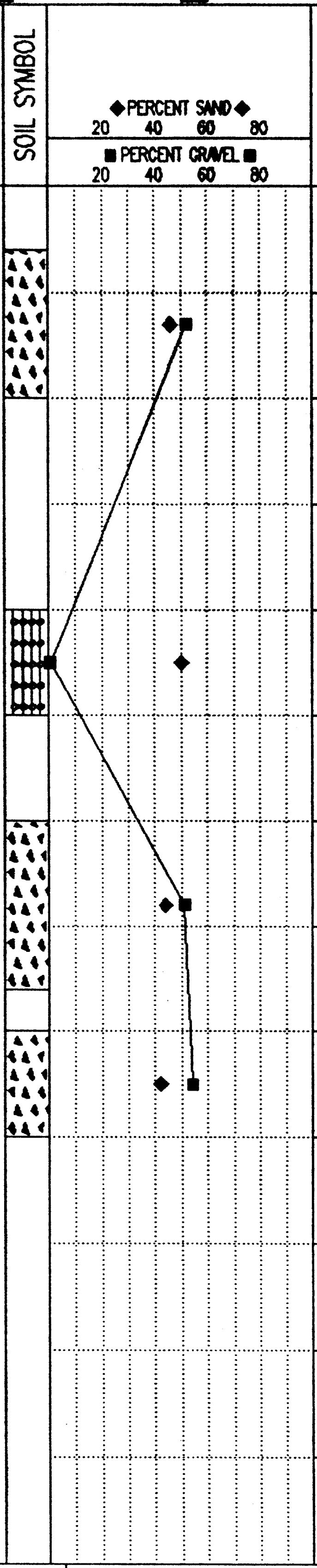
2001
Test Pit Logs

SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-01
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ◫ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	SILTY SAND / SANDY SILT			
	POORLY GRADED GRAVEL WITH SAND (GP) -grey/brown -dry -medium dense -cobbles to 200mm (50-75% gravels)	☰	1	GP
1.0				
2.0	SILTY SAND (SM) -dark brown -damp -firm -exessive organics (+200mm wood, roots etc,) see photo	☰	2	SM
3.0	POORLY GRADED GRAVEL WITH SAND (GP) -dark brown -damp -loose -cobbles to 200mm (40-60% gravels)	☰	3	GP
4.0		☰	4	GP
	END HOLE @ 4.5m			
5.0				
6.0				





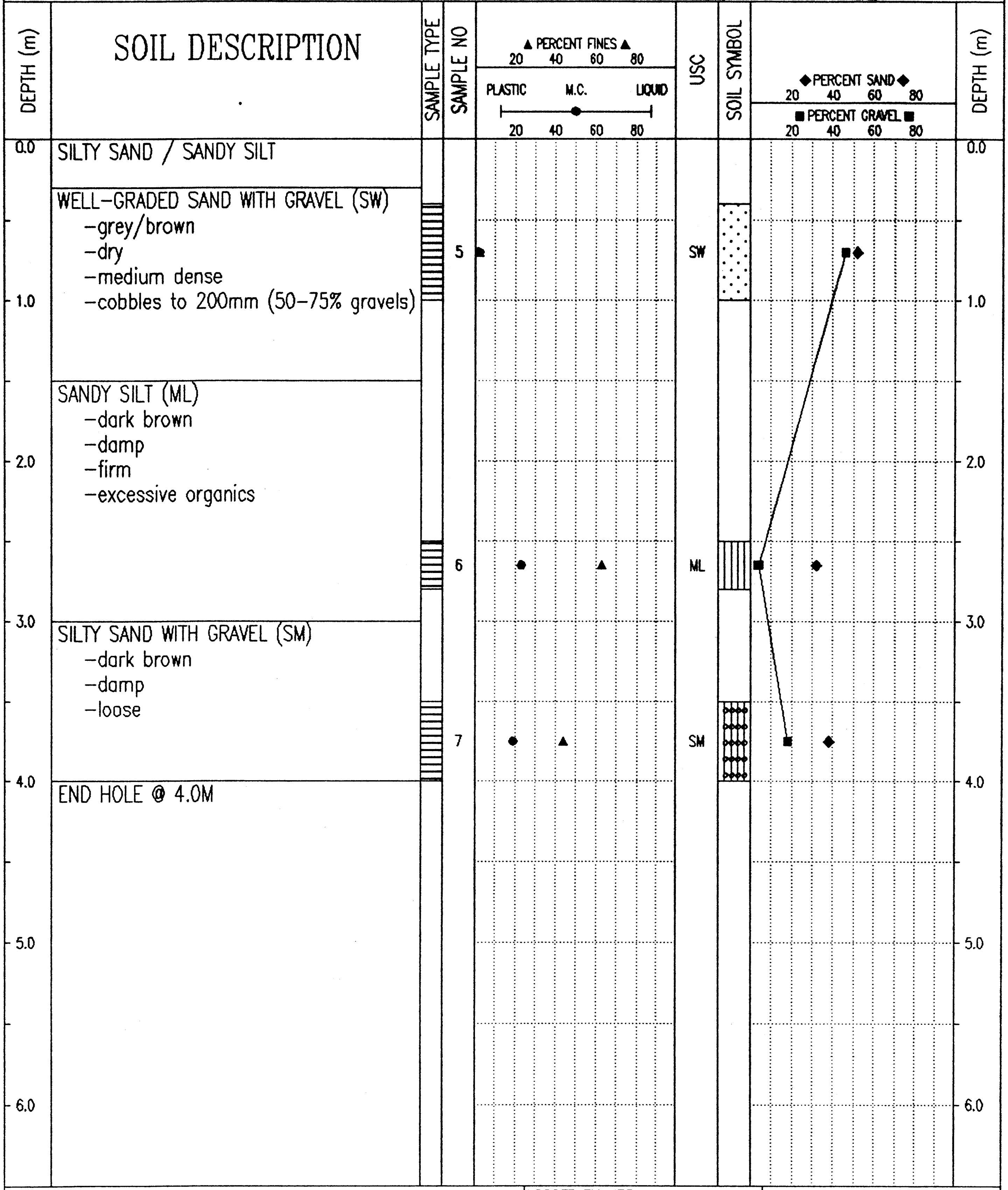
Government of Yukon
Transportation Engineering

LOGGED BY: JRP	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 02/02/11
Fig. No: 115-G-04A	Page 1 of 1

02/03/11 01:26PM

SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-02
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



SOIL DESCRIPTION

SILTY SAND / SANDY SILT

WELL-GRADED SAND WITH GRAVEL (SW)
- -grey/brown
- -dry
- -medium dense
- -cobbles to 200mm (50-75% gravels)

SANDY SILT (ML)
- -dark brown
- -damp
- -firm
- -excessive organics

SILTY SAND WITH GRAVEL (SM)
- -dark brown
- -damp
- -loose

END HOLE @ 4.0M

Government of Yukon
Transportation Engineering

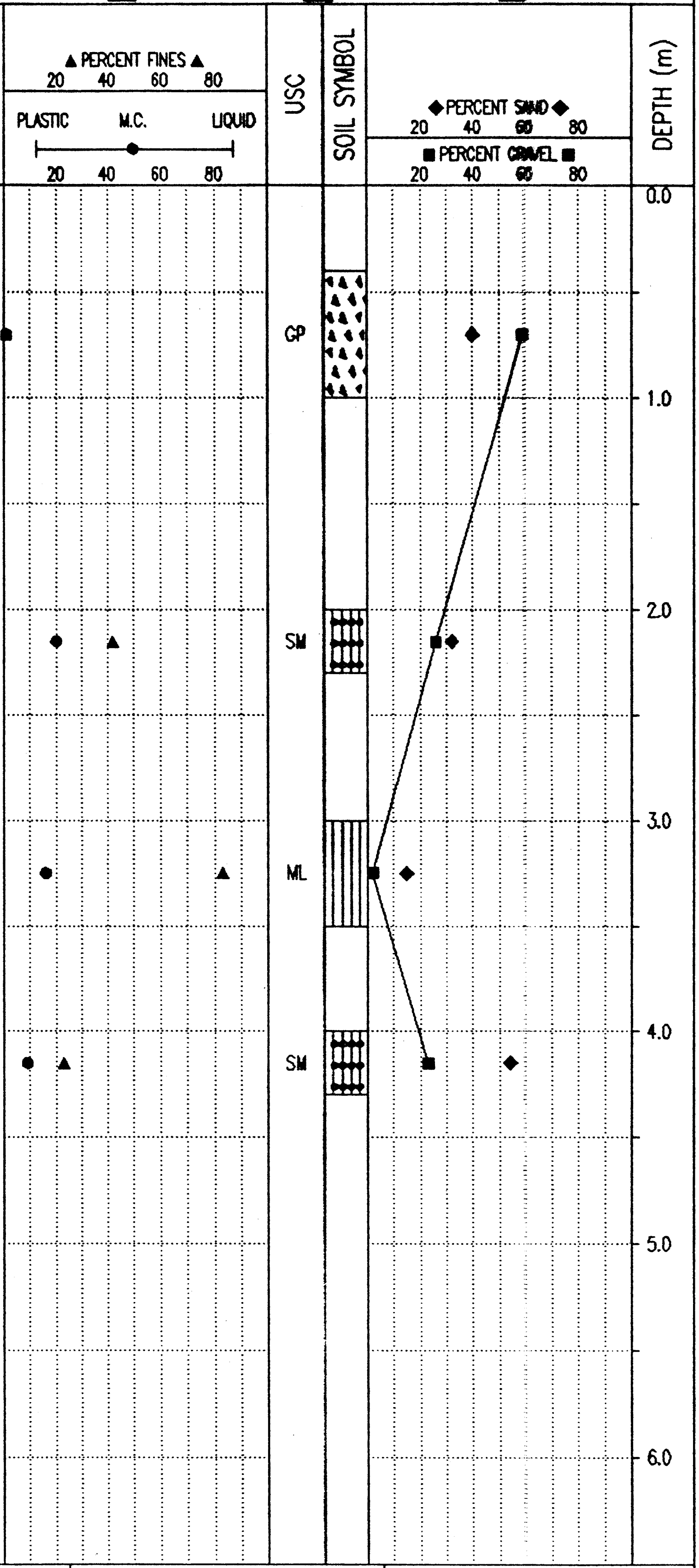
LOGGED BY: JRP	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 02/02/11
Fig. No: 115-G-04A	Page 1 of 1

02/03/07 02:54PM

SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-03
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▥ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	SILTY SAND/SANDY SILT			
	POORLY GRADED GRAVEL WITH SAND (GP) -grey/brown -dry -medium dense -cobbles to 150mm (50-75% gravels)	☰	8	GP
	SILTY SAND WITH GRAVEL (SM) -dark brown -damp -firm -highly organic	☰	9	SM
	SILT WITH SAND TO SILTY SAND WITH GRAVEL (ML)-(SM) -dark brown -damp -loose -40mm max size gravel (5-20% gravels)	☰	10	ML
		☰	11	SM
	END HOLE @ 4.3m			



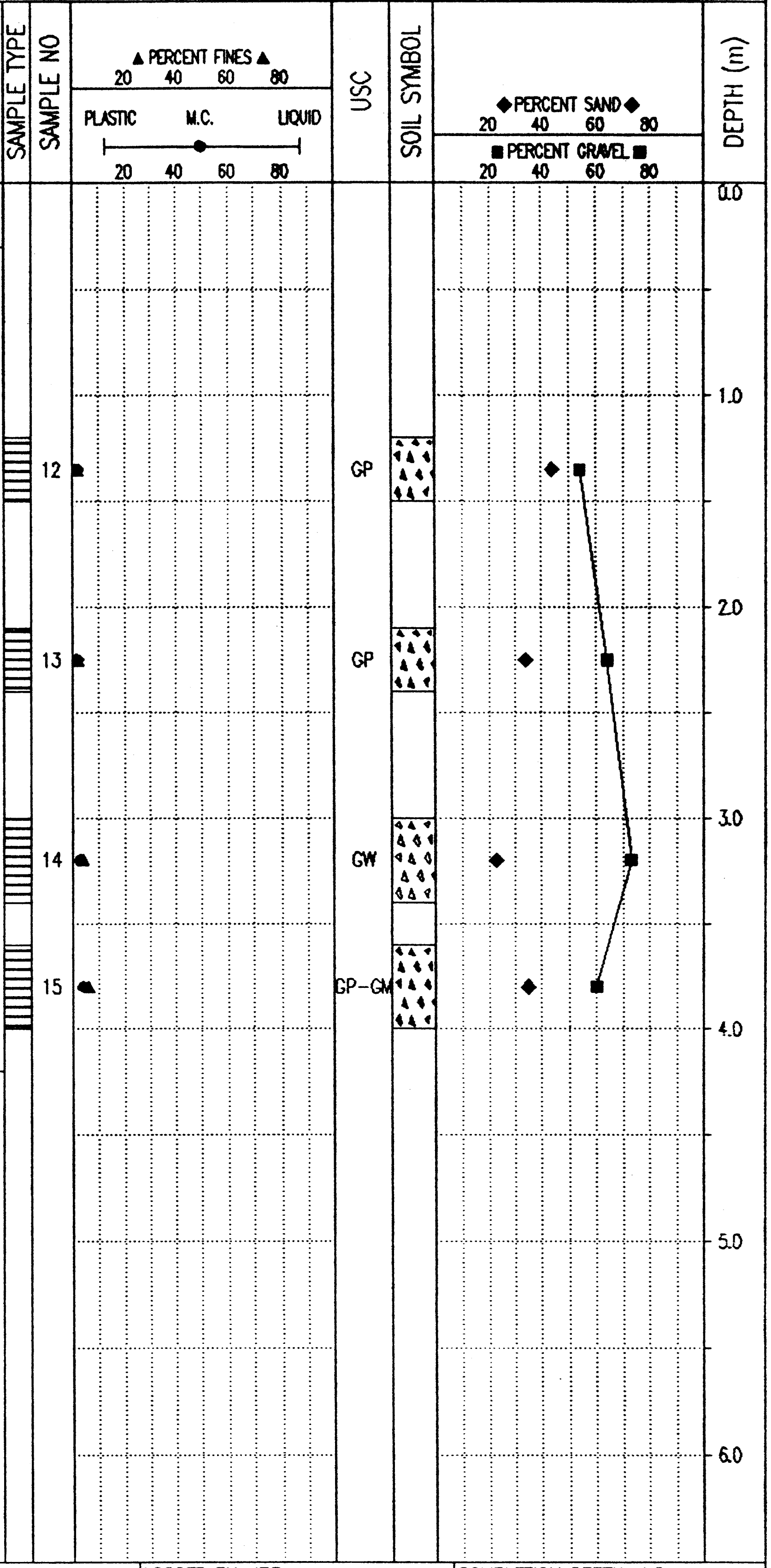
Government of Yukon Transportation Engineering	LOGGED BY: JRP	COMPLETION DEPTH: 4.0 m
	REVIEWED BY:	COMPLETE: 02/02/11
	Fig. No: 115-G-04A	Page 1 of 1

02/03/07 02:54PM

SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631–04
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	SILTY SAND/SANDY SILT
	POORLY TO WELL-GRADED GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GP)-(GW)-(GP-GM) -grey/brown -dry -medium dense -cobbles to 150mm (50-75% gravels)
1.0	
2.0	-damp to moist below 2.1m
3.0	
4.0	END HOLE @ 4.2m
5.0	
6.0	



Government of Yukon
Transportation Engineering

LOGGED BY: JRP	COMPLETION DEPTH: 4.2 m
REVIEWED BY:	COMPLETE: 02/02/11
Fig. No: 115-G-04A	Page 1 of 1

02/03/07 02:54PM

SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-05
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▯ CORE

DEPTH (m)

SOIL DESCRIPTION

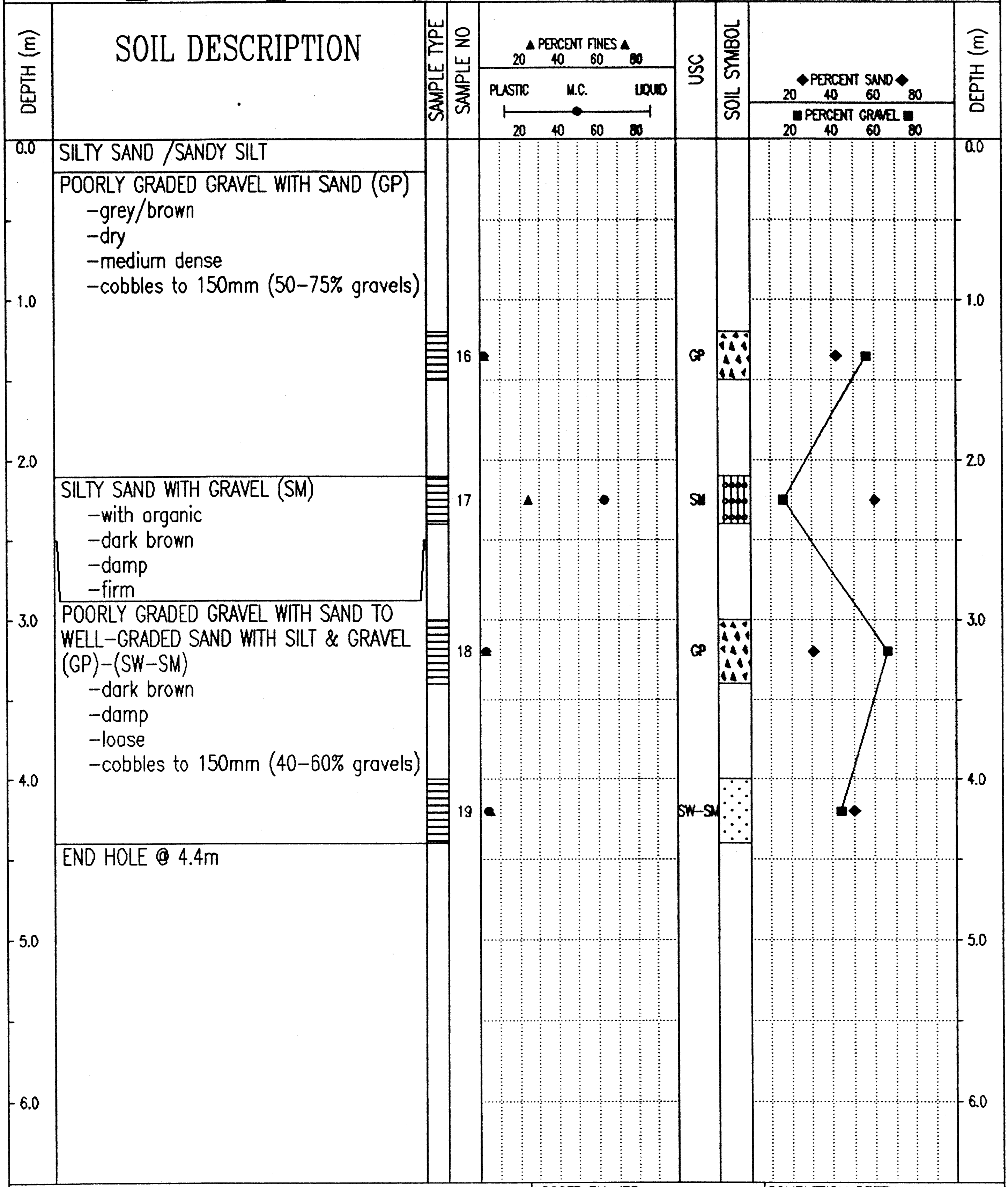
SILTY SAND /SANDY SILT

POORLY GRADED GRAVEL WITH SAND (GP)
- grey/brown
- dry
- medium dense
- cobbles to 150mm (50–75% gravels)

SILTY SAND WITH GRAVEL (SM)
- with organic
- dark brown
- damp
- firm

POORLY GRADED GRAVEL WITH SAND TO WELL-GRADED SAND WITH SILT & GRAVEL (GP)-(SW-SM)
- dark brown
- damp
- loose
- cobbles to 150mm (40–60% gravels)

END HOLE @ 4.4m

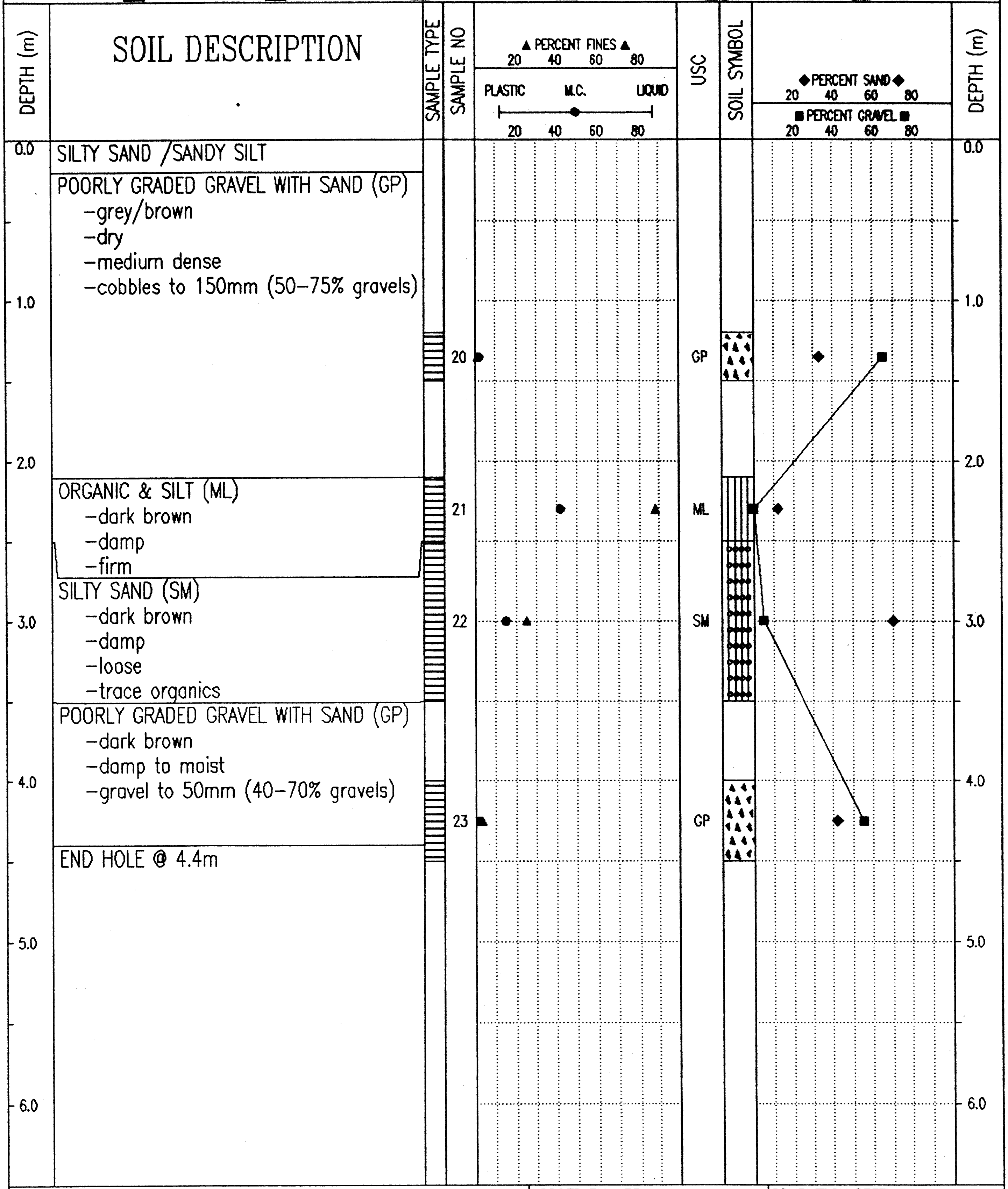


Government of Yukon Transportation Engineering	LOGGED BY: JRP	COMPLETION DEPTH: 4.4 m
	REVIEWED BY:	COMPLETE: 02/02/11
	Fig. No: 115-G-04A	Page 1 of 1

02/03/08 09:09AM

SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-06
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SOIL DESCRIPTION

SILTY SAND /SANDY SILT

POORLY GRADED GRAVEL WITH SAND (GP)
- grey/brown
- dry
- medium dense
- cobbles to 150mm (50-75% gravels)

ORGANIC & SILT (ML)
- dark brown
- damp
- firm

SILTY SAND (SM)
- dark brown
- damp
- loose
- trace organics

POORLY GRADED GRAVEL WITH SAND (GP)
- dark brown
- damp to moist
- gravel to 50mm (40-70% gravels)

END HOLE @ 4.4m

Government of Yukon Transportation Engineering	LOGGED BY: JRP REVIEWED BY: Fig. No: 115-G-04A
	COMPLETION DEPTH: 4.4 m COMPLETE: 02/02/12 Page 1 of 1

02/03/11 01:30PM

SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-07
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE

DEPTH (m)

SOIL DESCRIPTION

0.0 SILTY SAND/SANDY SILT

POORLY GRADED GRAVEL WITH SAND (GP)
-grey/brown
-dry
-medium dense
-cobbles to 200mm (50-75% gravels)
-wood encountered throughout

1.0

2.0 ORGANIC SANDY SILT TO SILTY SAND (ML)-(SM)
-dark brown
-damp
-loose
-variable organic silt seams throughout
-slight decrease silt with depth

3.0

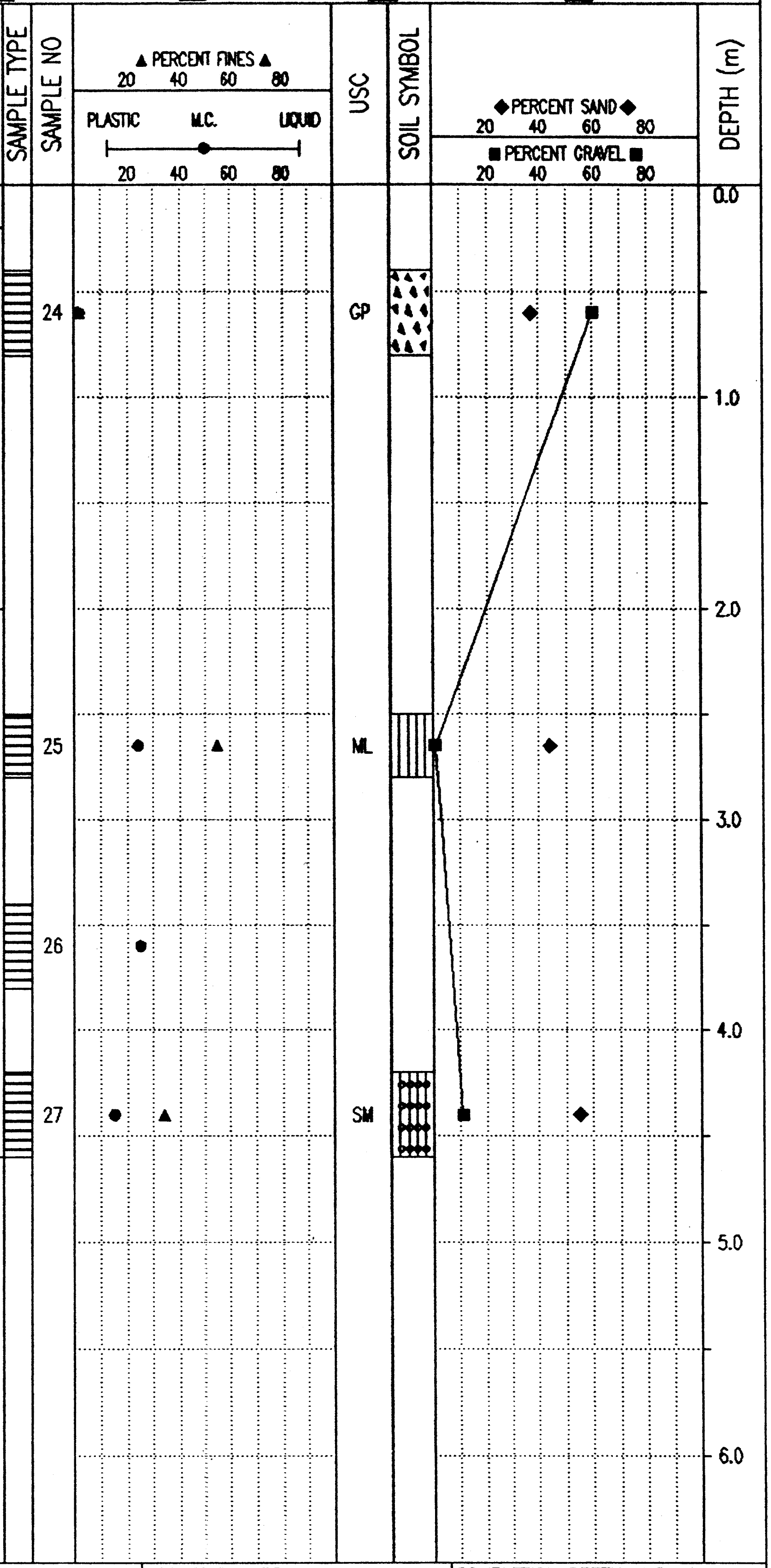
-lost sample #26

4.0

END HOLE @ 4.6m

5.0

6.0



Government of Yukon Transportation Engineering	LOGGED BY: JRP REVIEWED BY: Fig. No: 115-G-04A
	COMPLETION DEPTH: 4.6 m COMPLETE: 02/02/12 Page 1 of 1

02/03/08 09:11AM

SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-08
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ▤ BULK ▥ TUBE ▥ CORE

DEPTH (m)

SOIL DESCRIPTION

0.0 SILTY SAND/SANDY SILT

POORLY GRADED GRAVEL WITH SAND (GP)
-grey/brown
-dry
-medium dense
-cobbles to 200mm (50-75% gravels)

1.0

2.0

-dark brown below 2.3m
-moist below 2.3m
-trace of oxidation noted below 2.3m

3.0

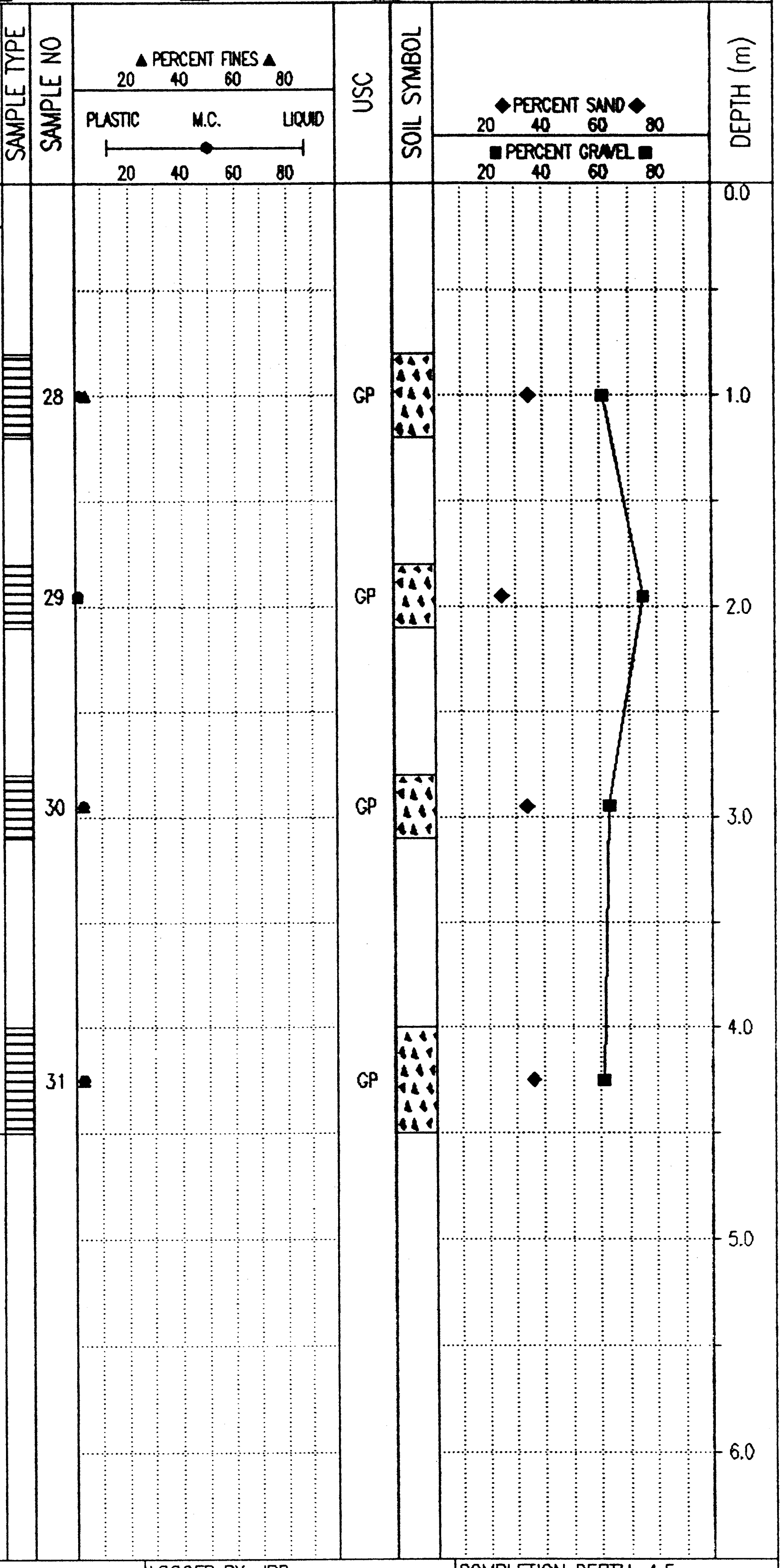
-wood noted between 3.8-4.2m

4.0

END HOLE @ 4.5m

5.0

6.0



Government of Yukon Transportation Engineering	LOGGED BY: JRP	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 02/02/12
	Fig. No: 115-G-04A	Page 1 of 1

02/03/07 02:54PM

SUBSURFACE EXPORATION & TESTING REPORT | LEWIS CREEK GRANULAR INVESTIGATION | TEST PIT NO: 631-09

ENGINEERING CAPITAL | PIT 115-G-04A | Project No: 092-202101-361

KOEHRING 6625 HOE | LOCATION:KM 1749.5 A/H LHS SEE PLAN | ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)

SOIL DESCRIPTION

0.0 SILTY SAND/SANDY SILT

POORLY GRADED GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GP-(GP-GM)
- -grey/brown
- -dry
- -medium dense
- -cobbles to 200mm (50-75% gravels)

1.0

- -dark brown below 1.6m
- -damp to moist
- -loose
- -cobbles to 150mm (50-75% gravels)
- -wood noted between 1.6-2.5m
- -some silt seams to 150mm thick between 1.6-2.5m

2.0

3.0

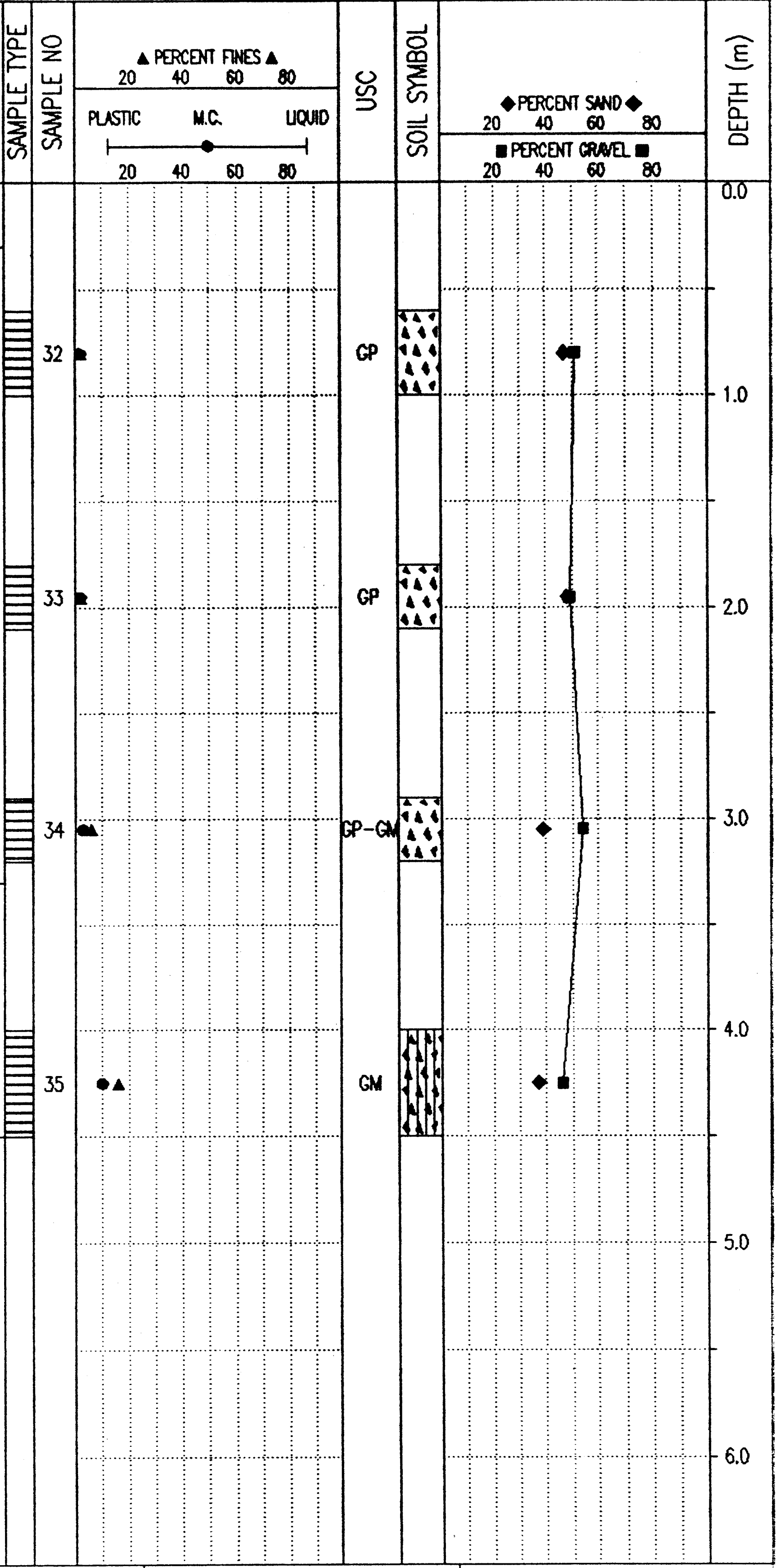
SILTY GRAVEL WITH SAND (GM)
- -dark brown
- -damp
- -loose
- -gravels to 40mm (10-25% gravels)

4.0

END HOLE @ 4.5m

5.0

6.0



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LOGGED BY: JRP | COMPLETION DEPTH: 4.5 m

REVIEWED BY: | COMPLETE: 02/02/12

Fig. No: 115-G-04A | Page 1 of 1

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SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-10
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ▤ BULK ▥ TUBE ▯ CORE

SOIL DESCRIPTION

DEPTH (m)

0.0 SILTY SAND/SANDY SILT

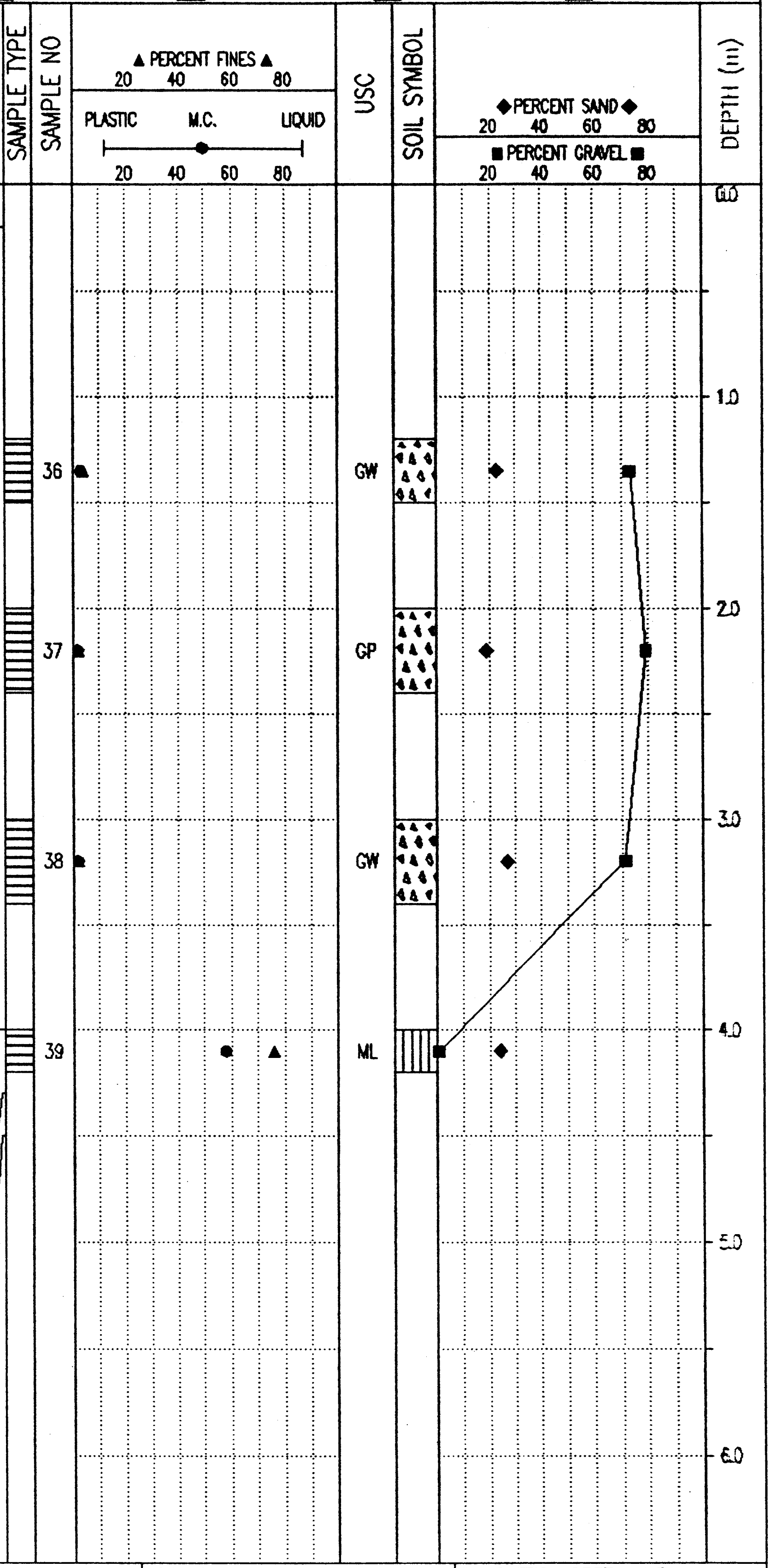
WELL TO POORLY GRADED GRAVEL WITH SAND (GW)-(GP)
- -grey/brown
- -dry
- -medium dense
- -cobbles to 200mm (50-75% gravels)

- -dark brown below 2.8m
- -damp to moist
- -loose
- -cobbles to 150mm (40-70% gravels)

4.0 ORGANIC & SILT WITH SAND (ML)
- -dark brown, damp, firm
- -roots & wood encountered

SANDY GRAVEL
- -dark brown, damp,loose

END HOLE @ 4.5m



LOGGED BY: JRP	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 02/02/12
Fig. No: 115-G-04A	Page 1 of 1

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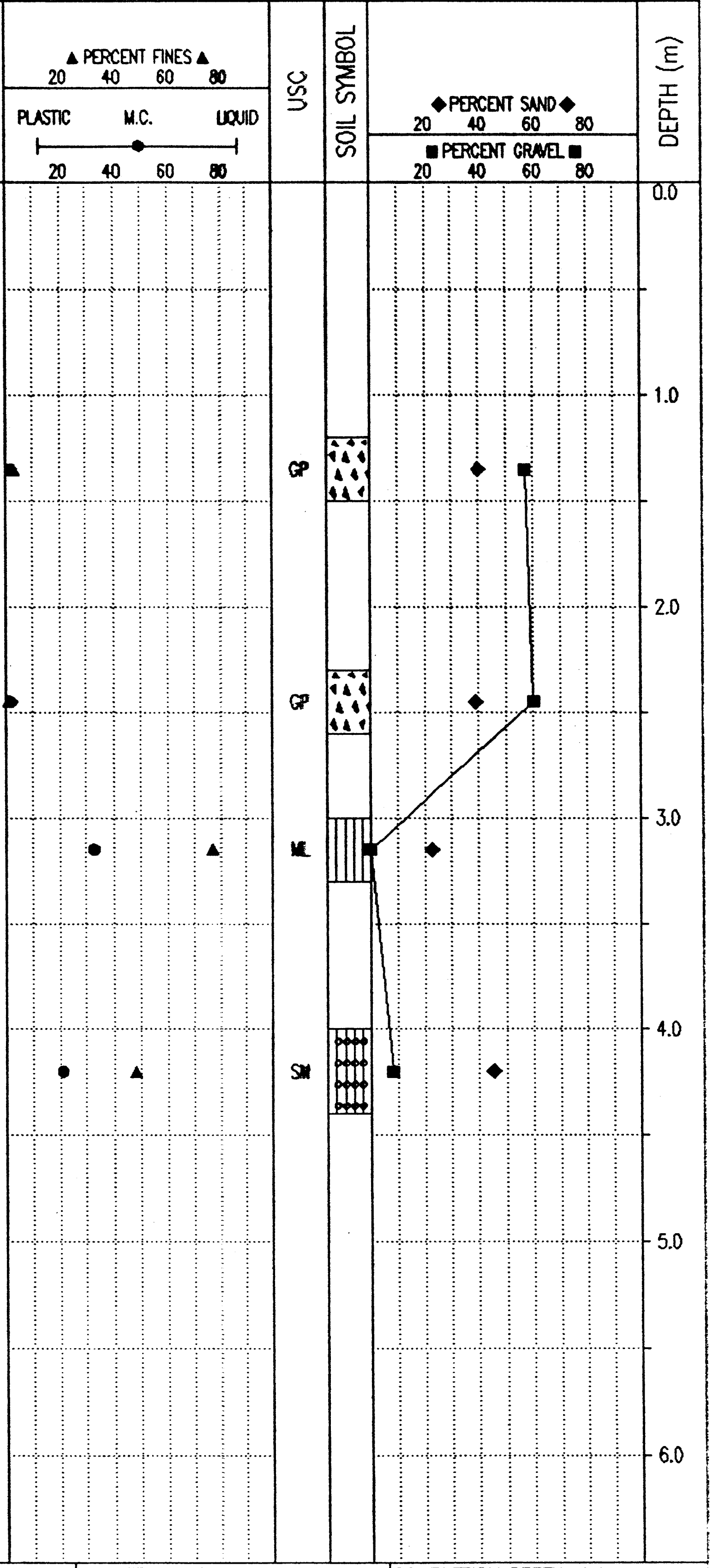
SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-11
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	SILTY SAND/SANDY SILT			
	POORLY GRADED GRAVEL WITH SAND (GP) -grey/brown -dry -medium dense -cobbles to 150mm (50-75% gravels) -wood encountered @ 1.0m	☰	40	GP
	-dark brown below 2.2m -damp to moist below 2.2m -gravel to 60mm below 2.2m (40-75% gravel)	☰	41	GP
3.0	ORGANIC & SILT WITH SAND (ML) -dark brown, damp, firm	☰	42	ML
	SILTY SAND (SM) -dark brown -damp -loose	☰	43	SM
	END HOLE @ 4.4m			



Government of Yukon Transportation Engineering	LOGGED BY: JRP	COMPLETION DEPTH: 4.4 m
	REVIEWED BY:	COMPLETE: 02/02/12
	Fig. No: 115-G-04A	Page 1 of 1

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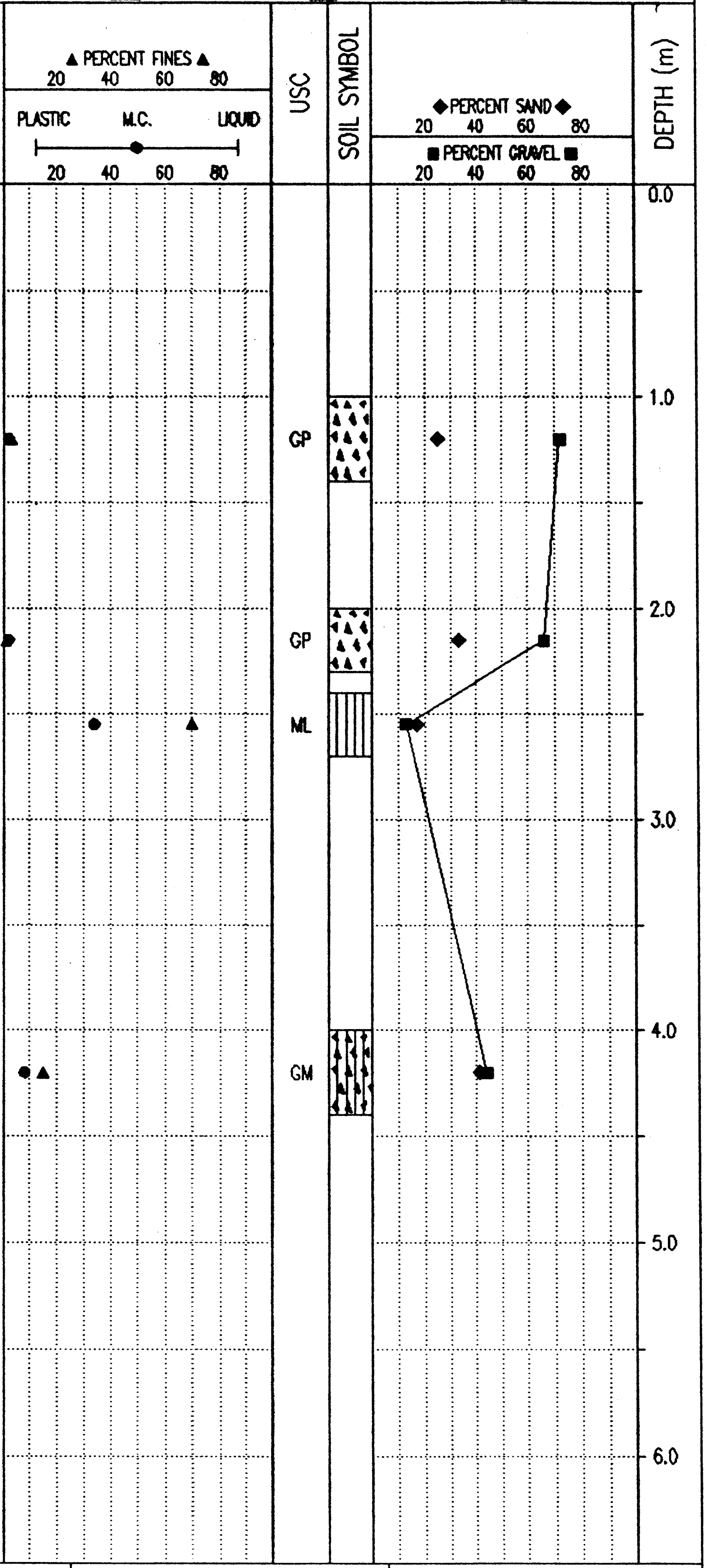
SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-12
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	SILTY SAND/SANDY SILT			
	POORLY GRADED GRAVEL WITH SAND (GP) -grey/brown -dry -medium dense -cobbles to 150mm (50-75% gravels)			
1.0		☰	44	GP
2.0	-damp below 1.8m -medium dense to loose below 1.8m -gravels to 40mm (50to 70% gravels)	☰	45	GP
	ORGANIC & SILT WITH SAND (ML) -dark brown -damp -firm	☰	46	ML
3.0				
	SILTY GRAVEL WITH SAND (GM) -dark brown -damp -loose -gravel to 40mm (40-60% gravels)			
4.0		☰	47	GM
	END HOLE @ 4.4m			
5.0				
6.0				



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LOGGED BY: JRP	COMPLETION DEPTH: 4.4 m
REVIEWED BY:	COMPLETE: 02/02/12
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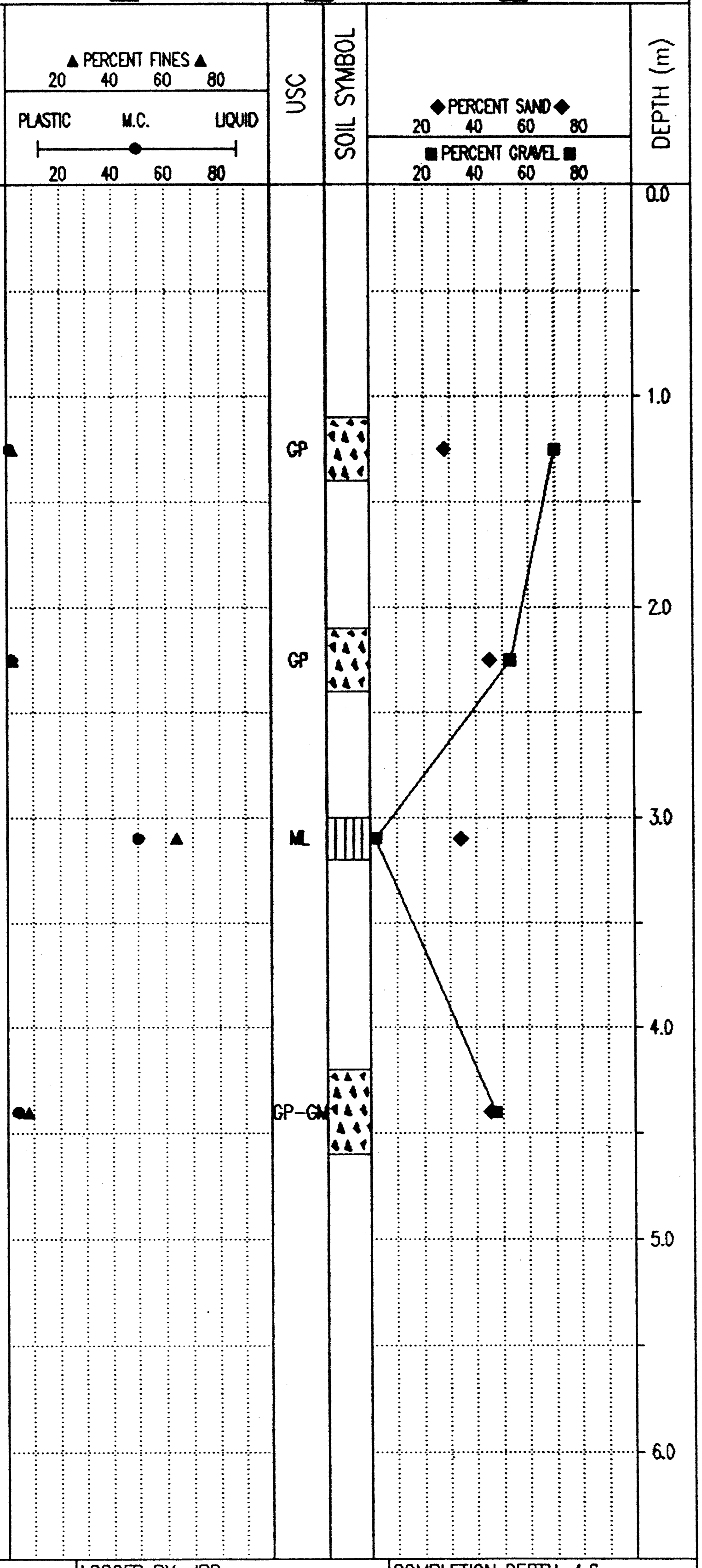
SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-13
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ◫ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	SILTY SAND /SANDY SILT			
	POORLY GRADED GRAVEL WITH SAND (GP) -grey/brown -cobbles to 150mm (50-75% gravels) -dry -medium dense -sandy silt/silty sand layer 0.9m-1.0m (100mm thick)	☰	48	GP
2.0	-dark brown below 2.1m -damp to moist below 2.1m -loose below 2.1m -some wood encountered 2.1-3.0m	☰	49	GP
3.0	ORGANIC @ SANDY SILT (ML) -dark brown,damp,loose	☰	50	ML
	POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM) -dark brown -damp -loose -40mm maximum (30-60% gravels)	☰	51	GP-GM
	END HOLE @ 4.6m			



Government of Yukon Transportation Engineering	LOGGED BY: JRP	COMPLETION DEPTH: 4.6 m
	REVIEWED BY:	COMPLETE: 02/02/12
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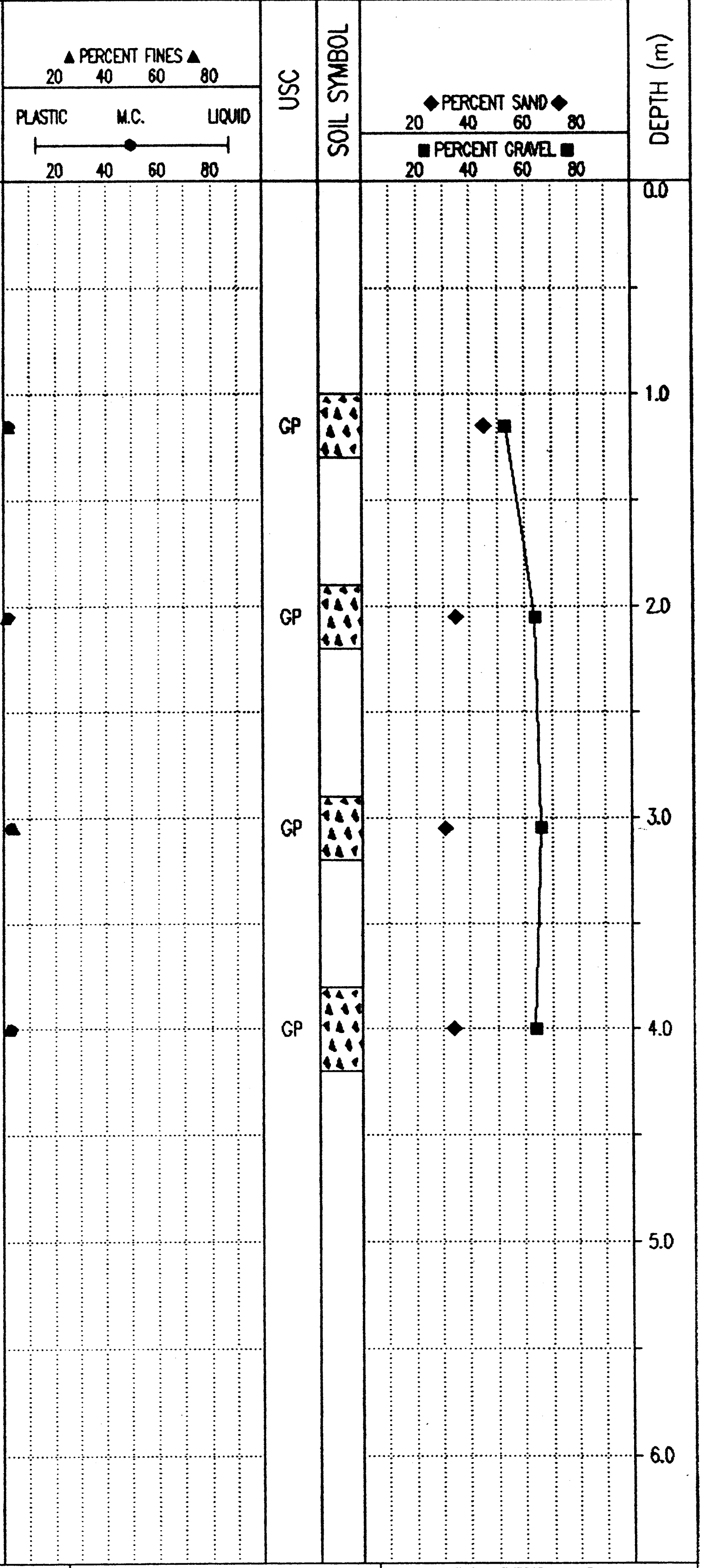
SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-14
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	SILTY SAND/SANDY SILT			
	POORLY GRADED GRAVEL WITH SAND (GP) -grey/brown -dry -medium dense -cobbles to 150mm (50-70% gravels)			
1.0		☰	52	GP
2.0		☰	53	GP
	-dark brown below 2.1m -damp to moist -loose -(40-70% gravels)			
3.0		☰	54	GP
4.0		☰	55	GP
	END HOLE @ 4.2m			
5.0				
6.0				



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REVIEWED BY:	COMPLETE: 02/02/12
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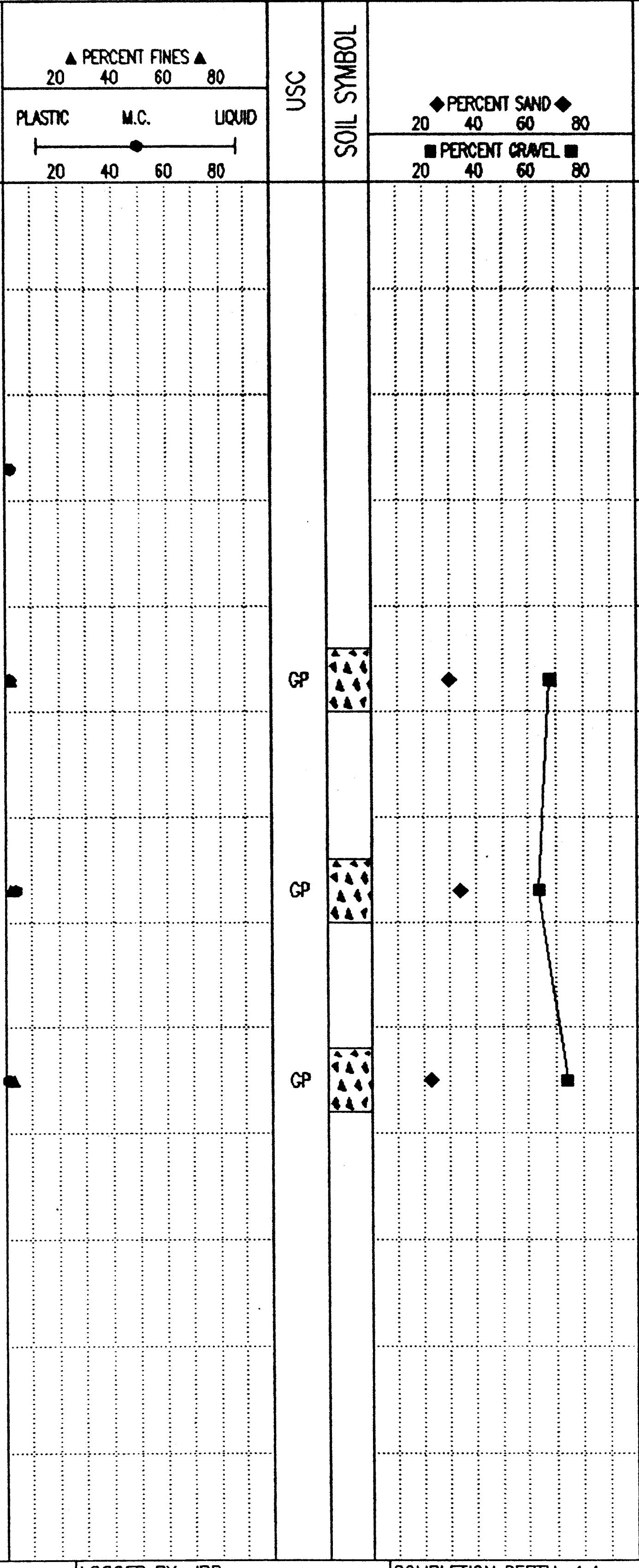
SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-15
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▯ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE NO	USC
0.0	SILTY SAND/SANDY SILT		
	POORLY GRADED GRAVEL WITH SAND (GP) -grey brown -dry -medium dense -cobbles to 150mm (50-70 gravels)		
1.0	-wood encountered @ 1.0m -lost sample # 56	56	
2.0	-dark brown below 1.9m -moist -loose -cobbles to 150mm (40-70% gravels)	57	GP
3.0		58	GP
4.0		59	GP
	END HOLE @ 4.4m		
5.0			
6.0			



Government of Yukon

Transportation Engineering

LOGGED BY: JRP	COMPLETION DEPTH: 4.4 m
REVIEWED BY:	COMPLETE: 02/02/13
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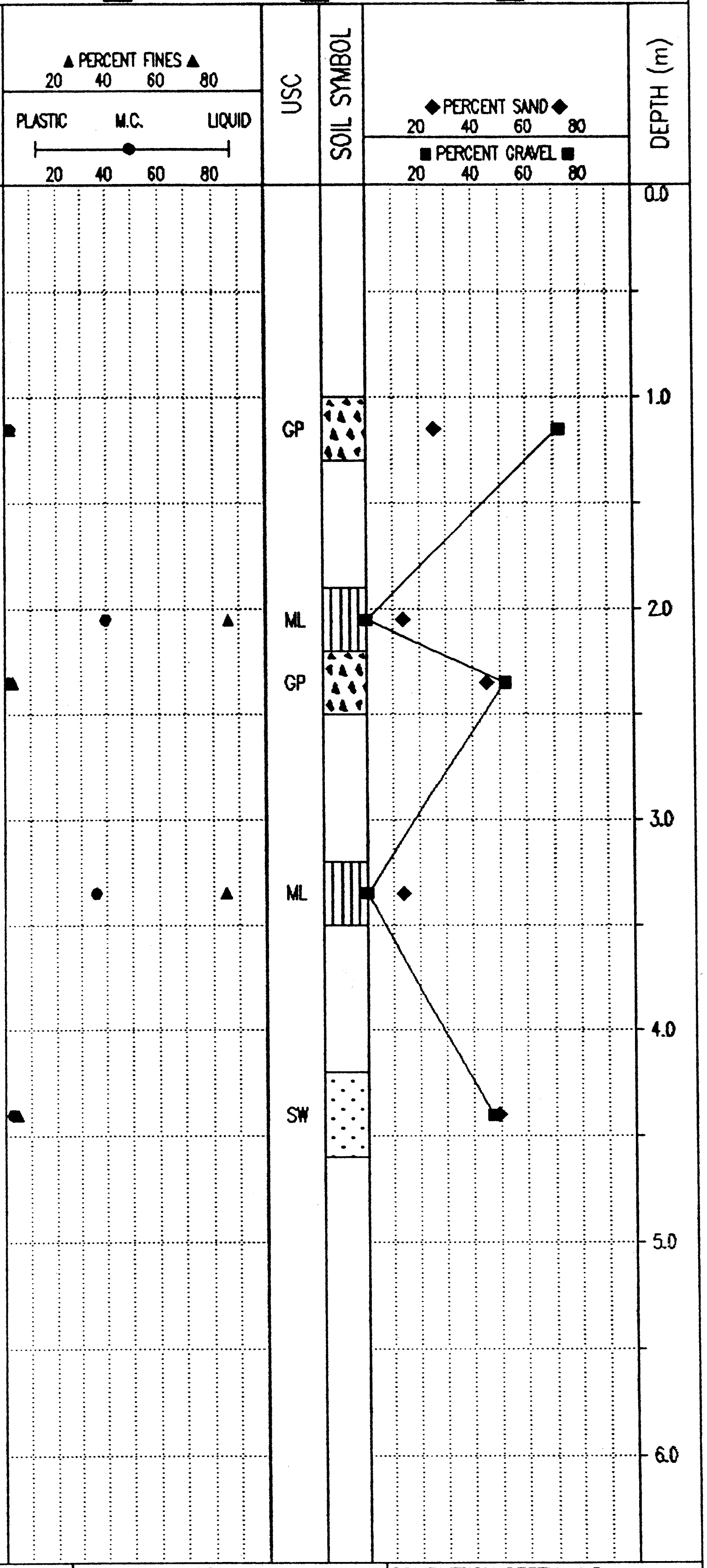
SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-16
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ◧ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC
0.0	SILTY SAND/SANDY SILT			
	POORLY GRADED GRAVEL WITH SAND (GP) -grey/brown -dry -medium dense -cobbles to 150mm (50-75% gravels) -wood encountered to 1.0m	☰	60	GP
2.0	ORGANIC SILT & SAND (ML) -dark brown,damp,firm	☰	61	ML
	POORLY GRADED GRAVEL WITH SAND (GP) -dark brown -damp -loose -60mm max size (40-60% gravels)	☰	62	GP
3.0	SILT (ML) -dark brown -damp -firm	☰	63	ML
4.0	WELL-GRADED SAND WITH GRAVEL (SW) -dark brown -damp -loose -60mm max size (40-60% gravels)	☰	64	SW
	END HOLE @ 4.6m			



Government of Yukon Transportation Engineering	
LOGGED BY: JRP	COMPLETION DEPTH: 4.6 m
REVIEWED BY:	COMPLETE: 02/02/13
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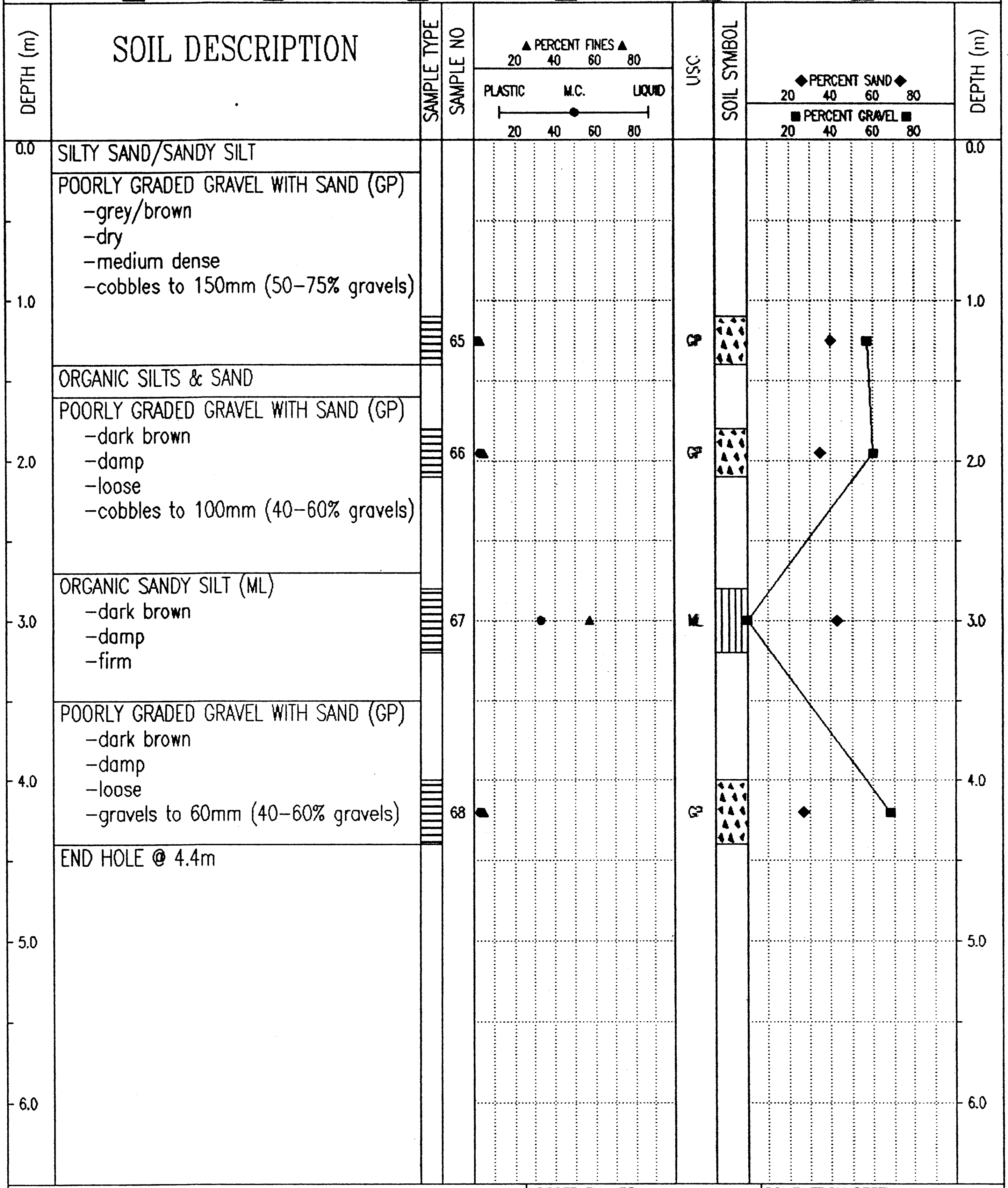
SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-17
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE



SILTY SAND/SANDY SILT

POORLY GRADED GRAVEL WITH SAND (GP)
- grey/brown
- dry
- medium dense
- cobbles to 150mm (50–75% gravels)

ORGANIC SILTS & SAND

POORLY GRADED GRAVEL WITH SAND (GP)
- dark brown
- damp
- loose
- cobbles to 100mm (40–60% gravels)

ORGANIC SANDY SILT (ML)
- dark brown
- damp
- firm

POORLY GRADED GRAVEL WITH SAND (GP)
- dark brown
- damp
- loose
- gravels to 60mm (40–60% gravels)

END HOLE @ 4.4m

Government of Yukon Transportation Engineering	LOGGED BY: JRP	COMPLETION DEPTH: 4.4 m
	REVIEWED BY:	COMPLETE: 02/02/13
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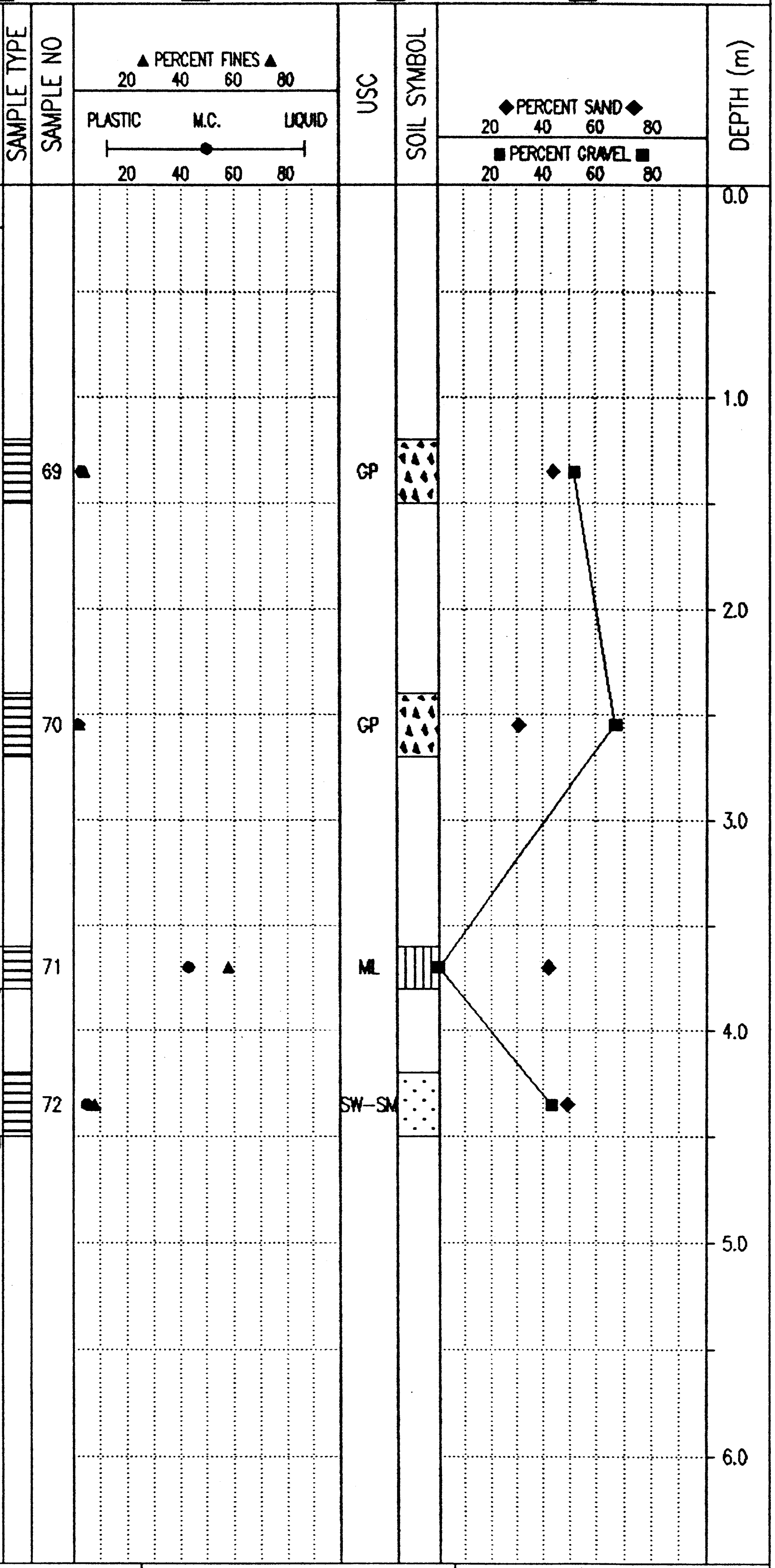
SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-18
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◪ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▯ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	SILTY SAND/SANDY SILT
	POORLY GRADED GRAVEL WITH SAND (GP) -grey/brown -dry -medium brown -cobbles to 150mm (50-75% gravels)
1.0	
2.0	-dark brown below 2.1m -damp to moist below 2.1m
3.0	
	ORGANIC SANDY SILT (ML) -dark brown,damp,firm
4.0	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -dark brown -damp -loose -gravels to 60mm (40-60% gravel)
	END HOLE @ 4.5m
5.0	
6.0	



Government of Yukon Transportation Engineering	LOGGED BY: JRP	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 02/02/13
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SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631–19
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▮ CORE

DEPTH (m)

SOIL DESCRIPTION

0.0 SILTY SAND/SANDY SILT

POORLY GRADED GRAVEL WITH SAND (GP)
- –grey/brown
- –dry
- –medium dense
- –cobbles to 150mm (50–75% gravels)

1.0

2.0

- –dark brown below 2.8m
- –damp below 2.8m

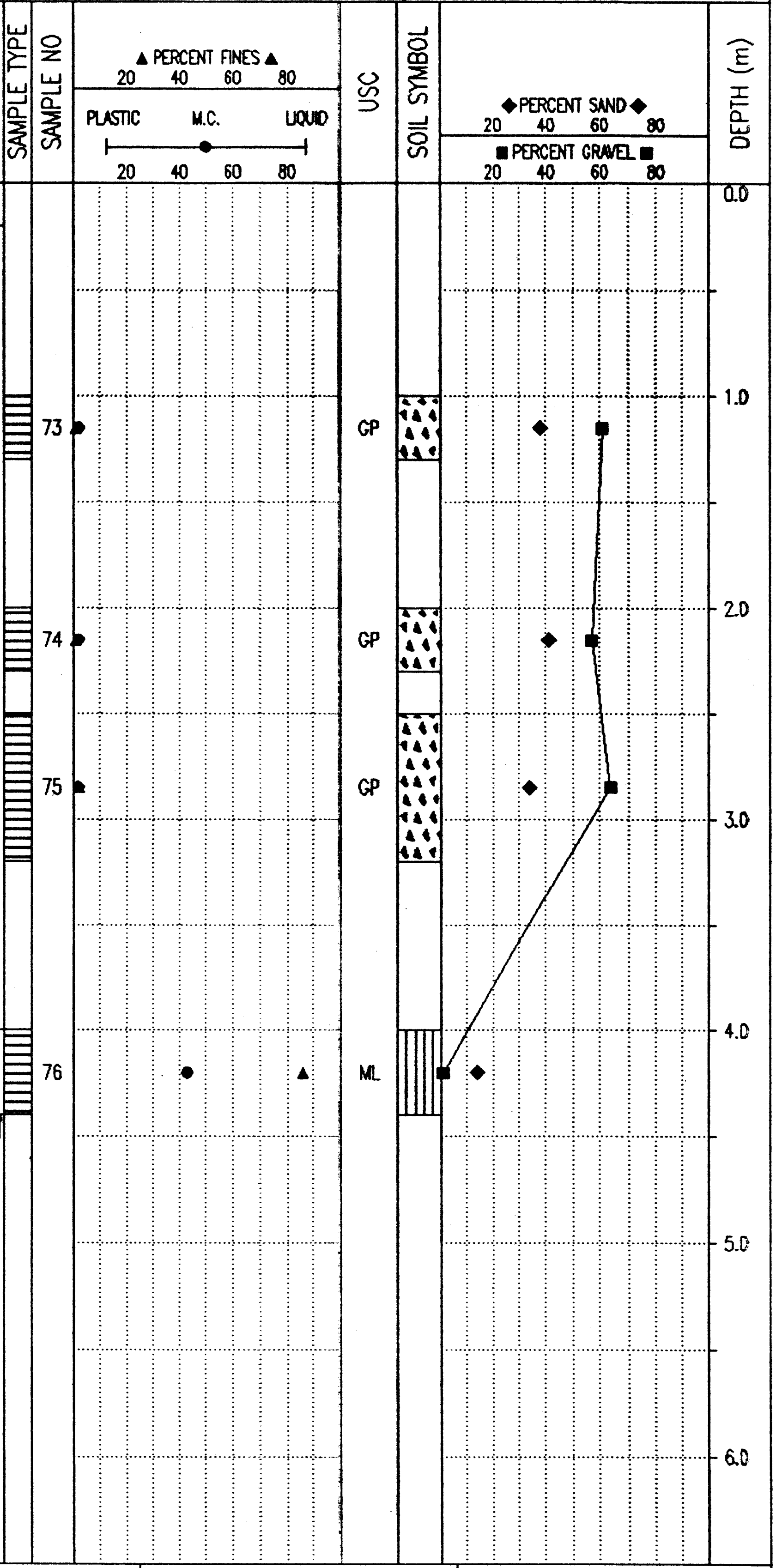
3.0

4.0 ORGANIC SILT (ML)
- –dark brown
- –damp
- –firm

END HOLE @ 4.4m

5.0

6.0



Government of Yukon Transportation Engineering	LOGGED BY: JRP	COMPLETION DEPTH: 4.4 m
	REVIEWED BY:	COMPLETE: 02/02/13
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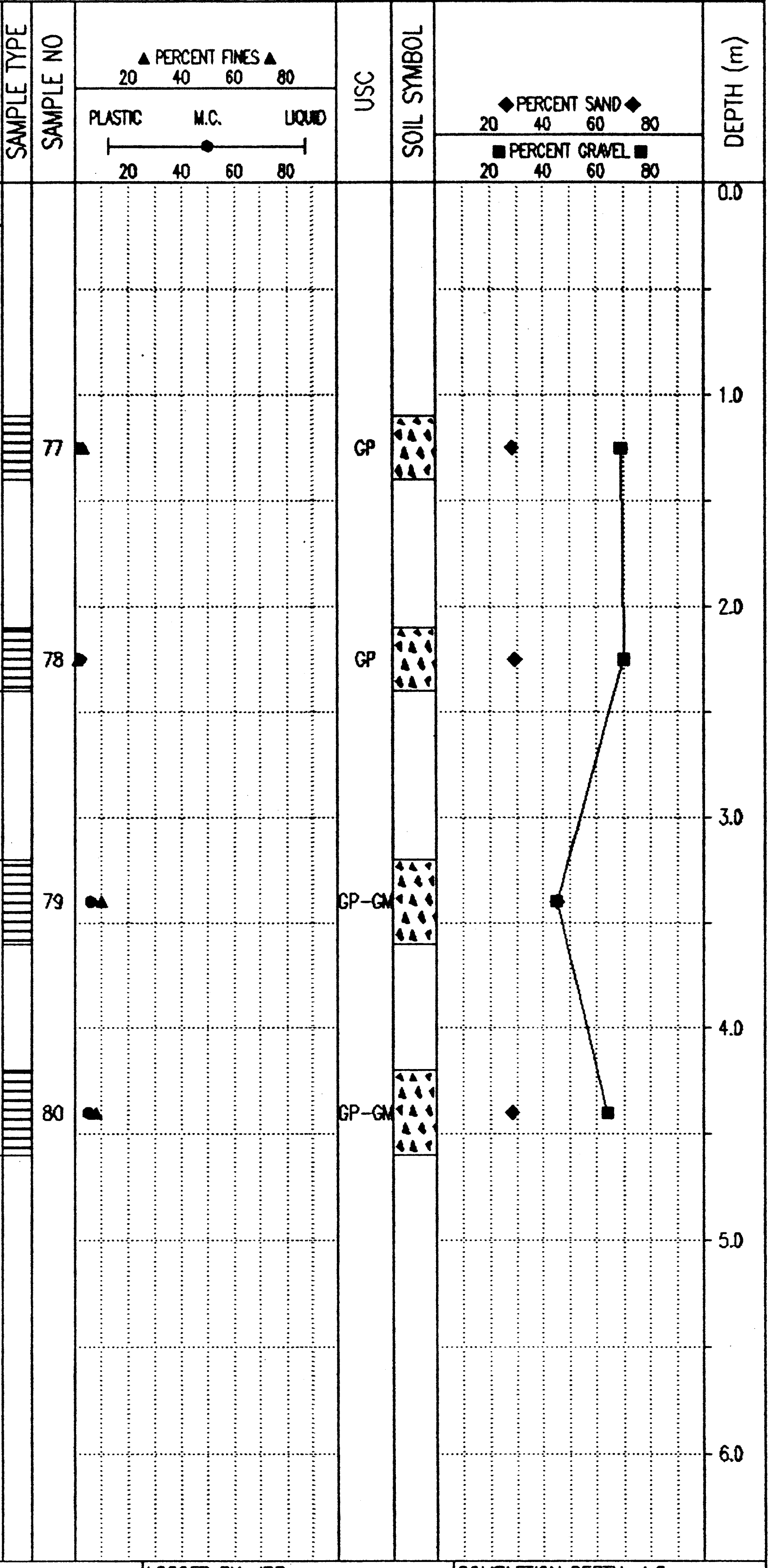
SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-20
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ‖ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	SILTY SAND/SANDY SILT
	POORLY GRADED GRAVEL WITH SAND (GP) -trace of silt in seams 150mm thick -grey/brown -dry -medium dense -cobbles to 150mm (50-75% gravels) -some wood in top 1.0m
	ORGANIC SILTS & SAND -dark brown -damp -firm
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -dark brown -damp to moist -cobbles to 100mm (30-70% gravels)
	END HOLE @ 4.6m



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LOGGED BY: JRP	COMPLETION DEPTH: 4.6 m
REVIEWED BY:	COMPLETE: 02/02/13
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SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-21
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ▮ CORE

SOIL DESCRIPTION

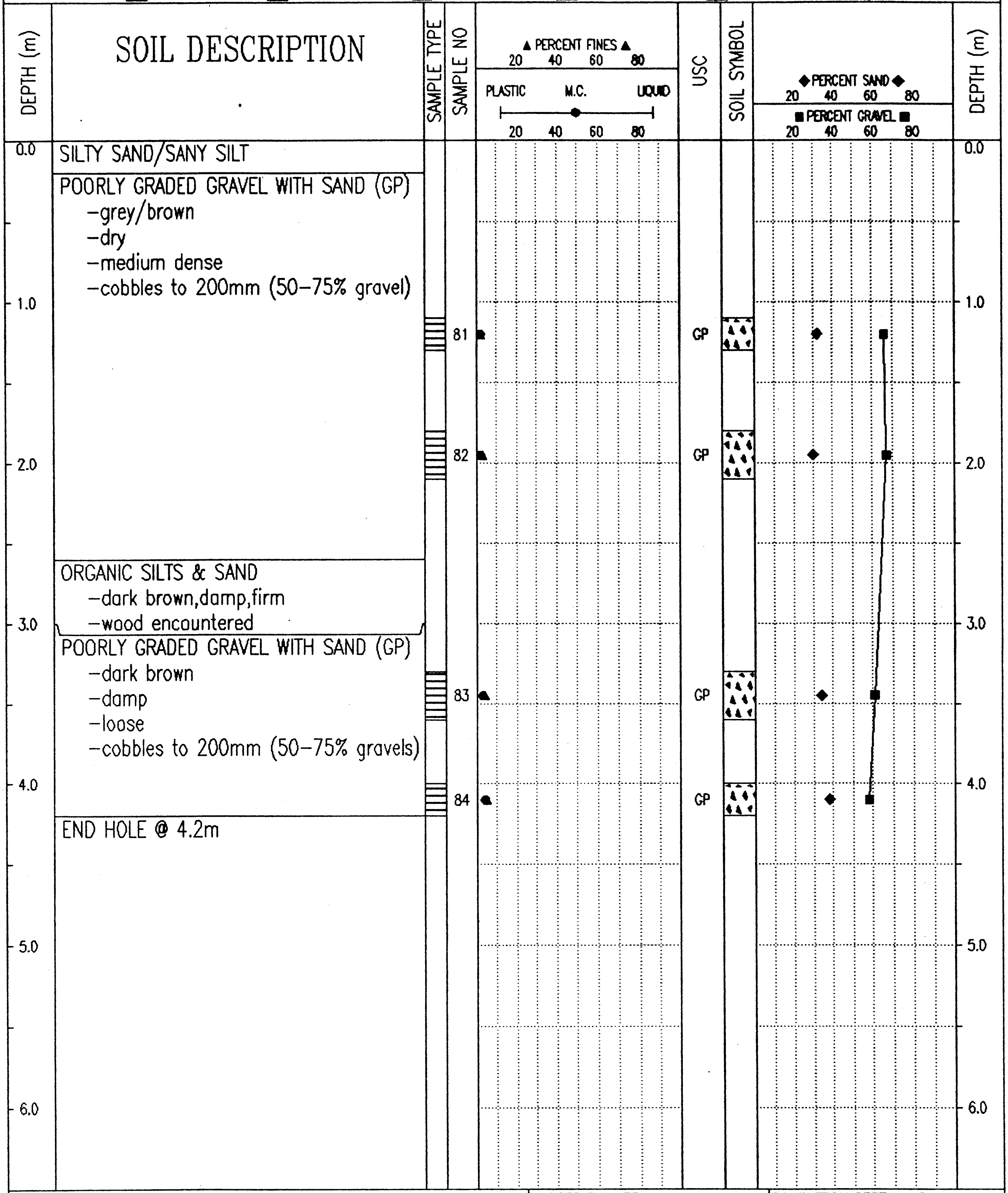
0.0 SILTY SAND/SANY SILT

POORLY GRADED GRAVEL WITH SAND (GP)
- grey/brown
- dry
- medium dense
- cobbles to 200mm (50-75% gravel)

ORGANIC SILTS & SAND
- dark brown,damp,firm
- wood encountered

POORLY GRADED GRAVEL WITH SAND (GP)
- dark brown
- damp
- loose
- cobbles to 200mm (50-75% gravels)

END HOLE @ 4.2m



Government of Yukon Transportation Engineering	LOGGED BY: JRP
	REVIEWED BY:
	Fig. No: 115-G-04A
COMPLETION DEPTH: 4.2 m	
COMPLETE: 02/02/13	
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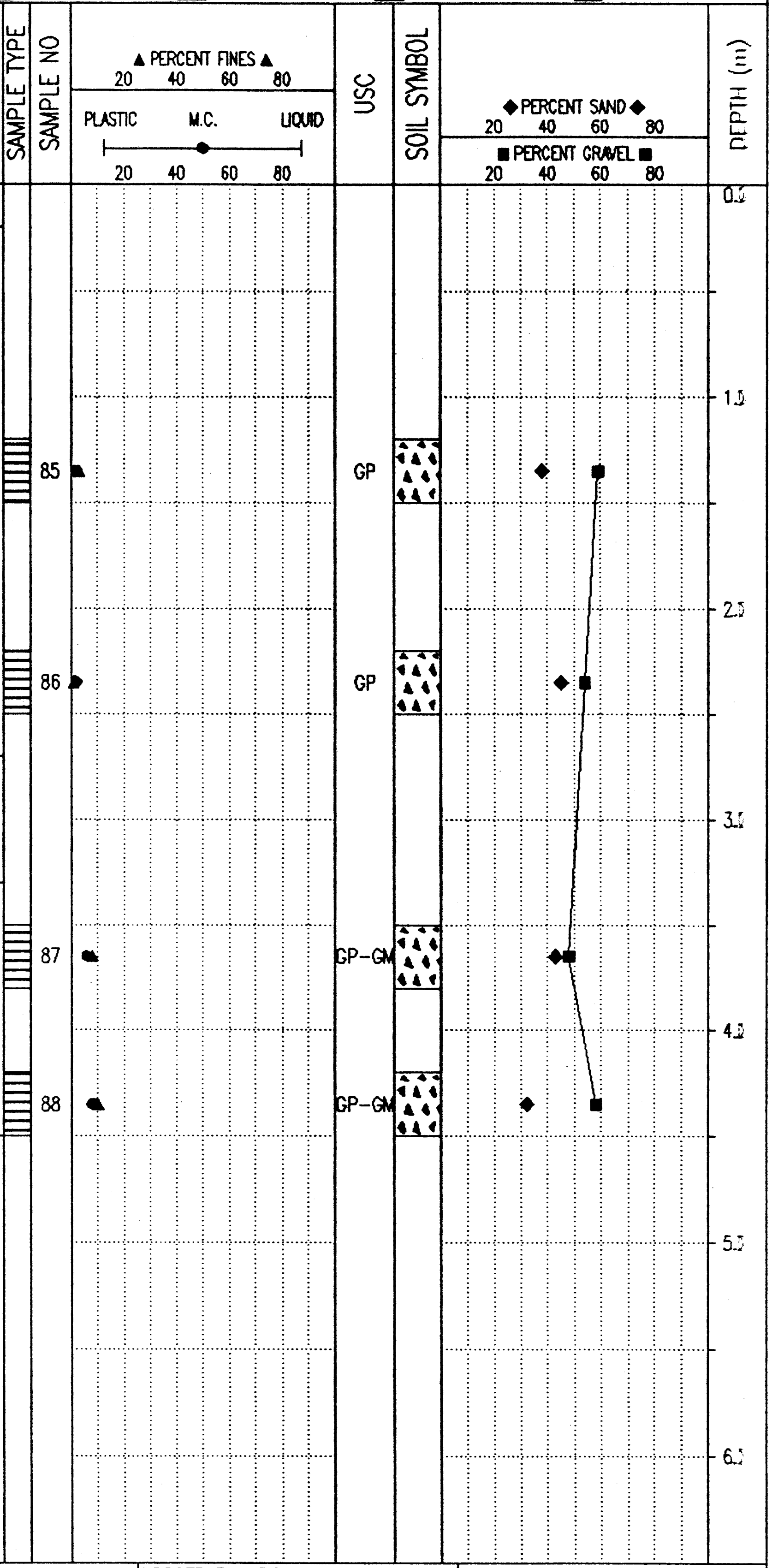
SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-22
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ◿ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ◫ CORE

DEPTH (m)	SOIL DESCRIPTION
0.0	SILTY SAND/SANDY SILT
	POORLY GRADED GRAVEL WITH SAND (G) -grey/brown -dry -medium dense -cobbles to 200mm (50-75% gravels) -wood encountered throughout
1.0	
2.0	
	ORGANIC SILTS & SANDS -dark brown,damp,firm -wood encountered
3.0	
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -dark brown -damp to moist -loose -cobbles to 200mm (40-75% gravels)
4.0	
	END HOLE @ 4.5m
5.0	
6.0	

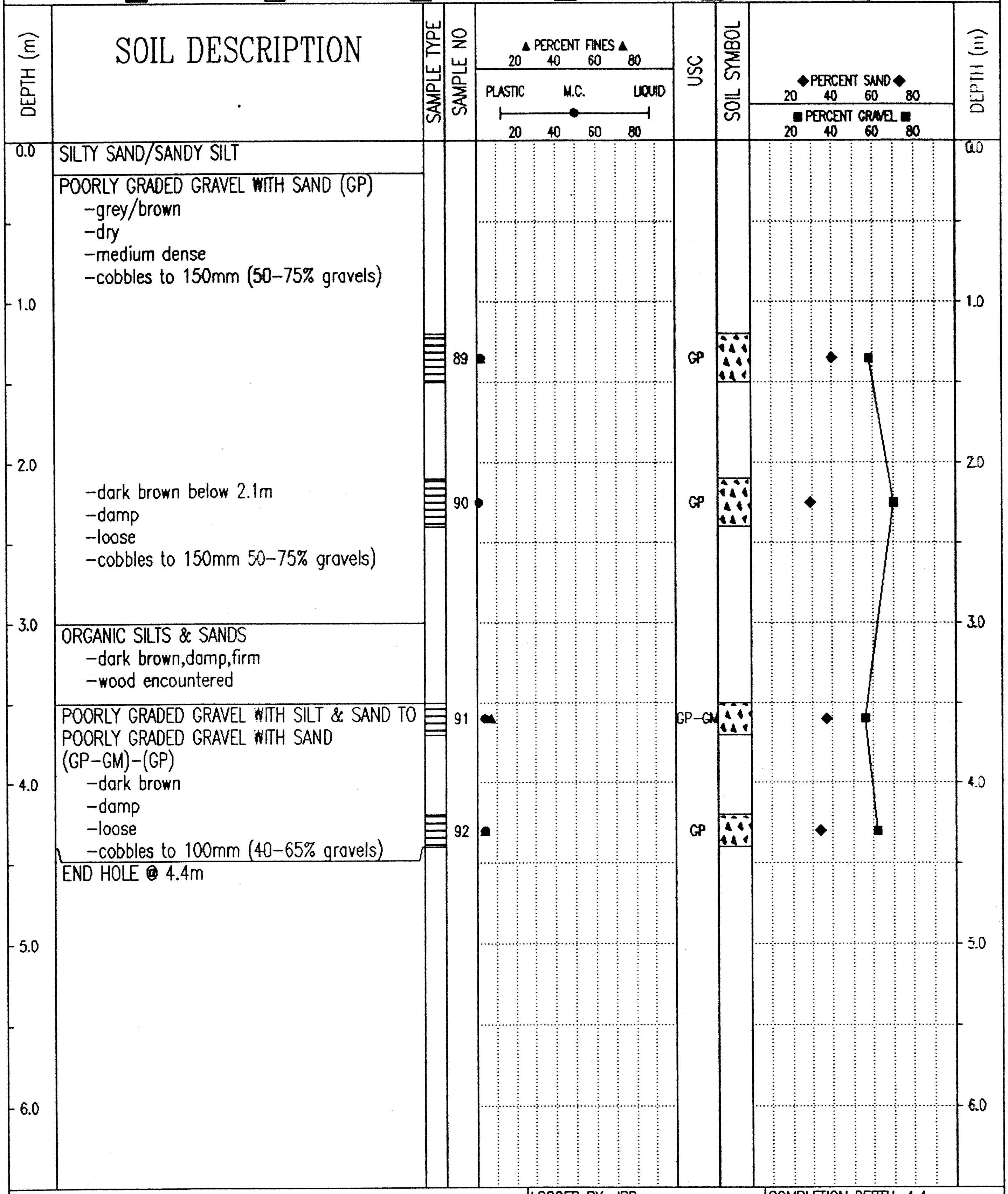


Government of Yukon Transportation Engineering	LOGGED BY: JRP	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 02/02/13
	Fig. No: 115-G-04A	Page 1 of 1

02/03/11 01:31PM

SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-23
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



SOIL DESCRIPTION

0.0 SILTY SAND/SANDY SILT

POORLY GRADED GRAVEL WITH SAND (GP)
- grey/brown
- dry
- medium dense
- cobbles to 150mm (50–75% gravels)

- dark brown below 2.1m
- damp
- loose
- cobbles to 150mm 50–75% gravels)

3.0 ORGANIC SILTS & SANDS
- dark brown,damp,firm
- wood encountered

POORLY GRADED GRAVEL WITH SILT & SAND TO POORLY GRADED GRAVEL WITH SAND (GP-GM)-(GP)
- dark brown
- damp
- loose
- cobbles to 100mm (40–65% gravels)

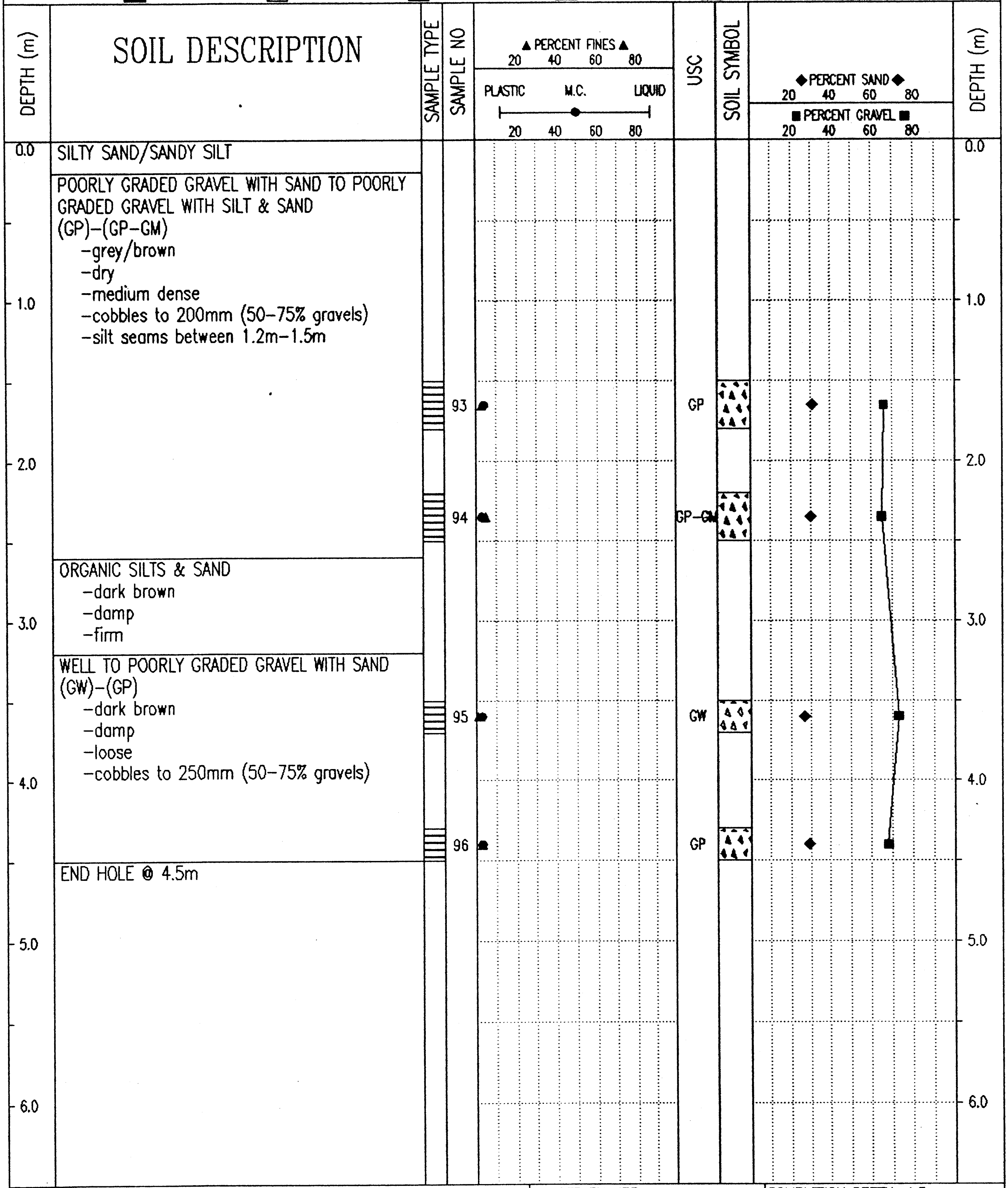
END HOLE @ 4.4m

Government of Yukon Transportation Engineering	LOGGED BY: JRP	COMPLETION DEPTH: 4.4 m
	REVIEWED BY:	COMPLETE: 02/02/13
	Fig. No: 115-G-04A	Page 1 of 1

02/03/11 01:40PM

SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-24
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE



0.0 SILTY SAND/SANDY SILT

POORLY GRADED GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND
(GP)-(GP-GM)
- grey/brown
- dry
- medium dense
- cobbles to 200mm (50-75% gravels)
- silt seams between 1.2m-1.5m

ORGANIC SILTS & SAND
- dark brown
- damp
- firm

WELL TO POORLY GRADED GRAVEL WITH SAND
(GW)-(GP)
- dark brown
- damp
- loose
- cobbles to 250mm (50-75% gravels)

END HOLE @ 4.5m

Government of Yukon
Transportation Engineering

LOGGED BY: JRP
REVIEWED BY:
Fig. No: 115-G-04A
COMPLETION DEPTH: 4.5 m
COMPLETE: 02/02/13
Page 1 of 1

02/03/11 01:31PM

SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-25
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ☰ BULK ◫ TUBE ◨ CORE

DEPTH (m)

SOIL DESCRIPTION

0.0 SILTY SAND/SANDY SILT

POORLY GRADED GRAVEL WITH SAND (GP)
- grey/brown
- dry
- medium dense
- cobbles to 200mm (50-75% gravels)

1.0

2.0

- cobbles to 300mm below 2.8m

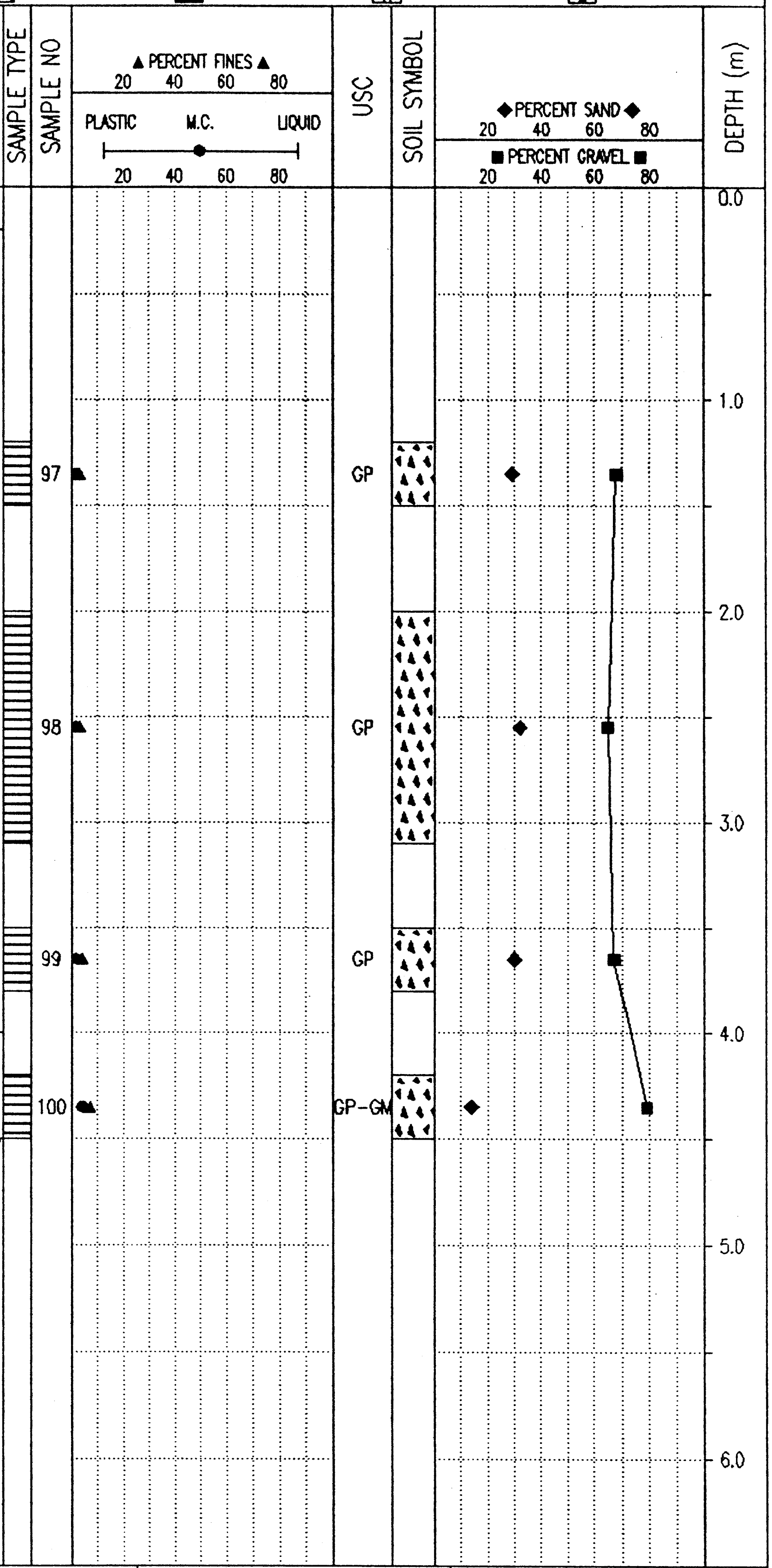
3.0

4.0 POORLY GRADED GRAVEL WITH SILT (GP-GM)
- grey/brown
- dry
- medium dense

END HOLE @ 4.5m

5.0

6.0



Government of Yukon Transportation Engineering	LOGGED BY: JRP	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 02/02/13
	Fig. No: 115-G-04A	Page 1 of 1

02/03/11 01:31PM

Pit 115 G-04
Km 1750 LHS Alaska Highway

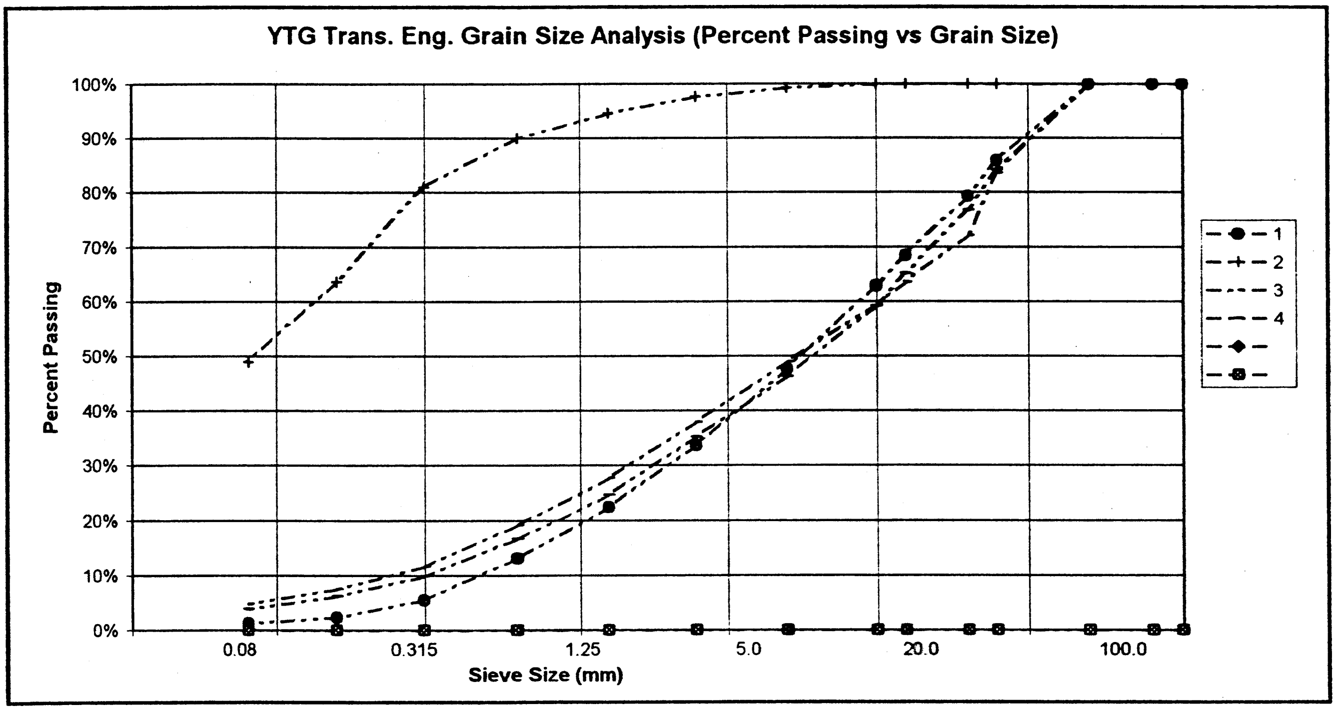
2001
Pit Run Sample Results

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)

HOLE No.: 631-01

DATE COMP: 2002/02/02

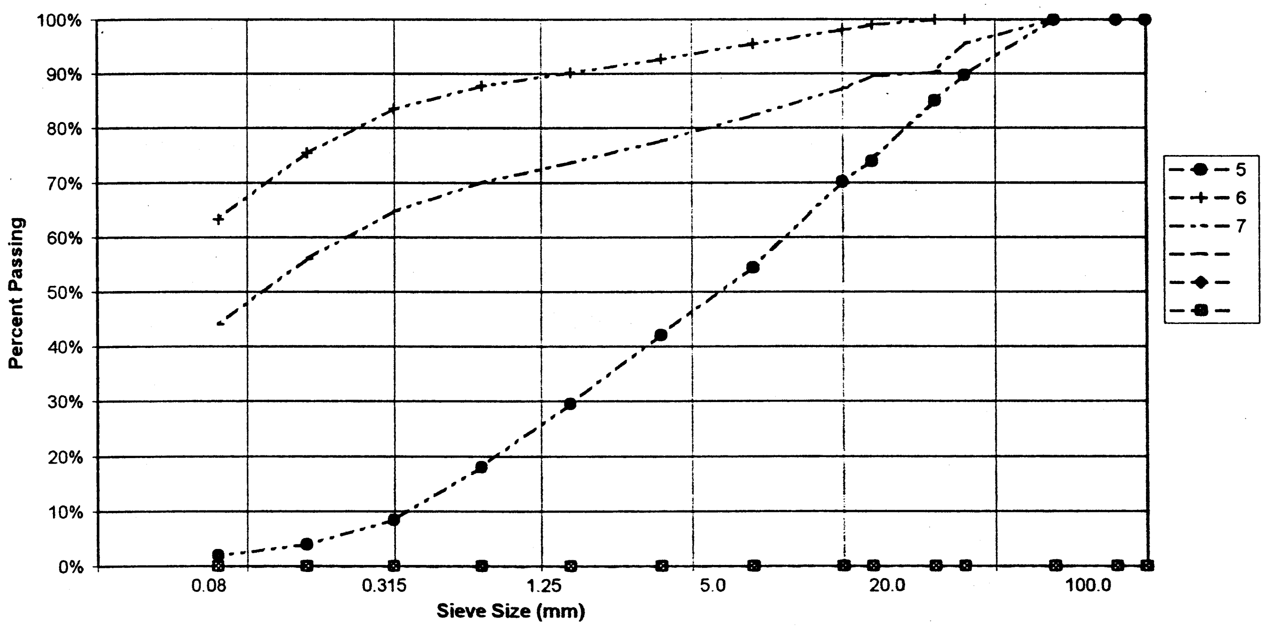
FIELD NO:	1	2	3	4		
LAB NO:	1	2	3	4		
DEPTH:	0.3-1.0	2.0-2.5	3.0-3.8	4.0-4.5		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	86%	100%	84%	84%		
20.0	79%	100%	72%	77%		
12.5	68%	100%	63%	65%		
10.0	63%	100%	59%	59%		
5.0	48%	99%	49%	46%		
2.5	34%	98%	38%	35%		
1.25	22%	95%	28%	25%		
0.630	13%	90%	19%	17%		
0.315	5%	81%	12%	10%		
0.160	2%	64%	7%	6%		
0.080	1%	49%	5%	4%		
M.C.(%):	2%	50%	4%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	52	1	51	54		
% SAND:	46	50	44	42		
% FINES:	1	49	5	4		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY SAND (SM)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)		


YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1 HOLE No.: 631-02
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.) DATE COMP: 2002/02/02

FIELD NO:	5	6	7			
LAB NO:	5	6	7			
DEPTH:	0.4-1.0	2.5-2.8	3.5-4.0			
TYPE:	BULK	BULK	BULK			
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	90%	100%	96%			
20.0	85%	100%	90%			
12.5	74%	99%	90%			
10.0	70%	98%	87%			
5.0	54%	96%	82%			
2.5	42%	93%	78%			
1.25	30%	90%	74%			
0.630	18%	88%	70%			
0.315	8%	84%	65%			
0.160	4%	75%	56%			
0.080	2%	63%	44%			
M.C.(%):	2%	23%	19%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	46	4	18			
% SAND:	52	32	38			
% FINES:	2	63	44			
CLASSIFICATION	WELL-GRADED SAND WITH GRAVEL (SW)	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)			

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

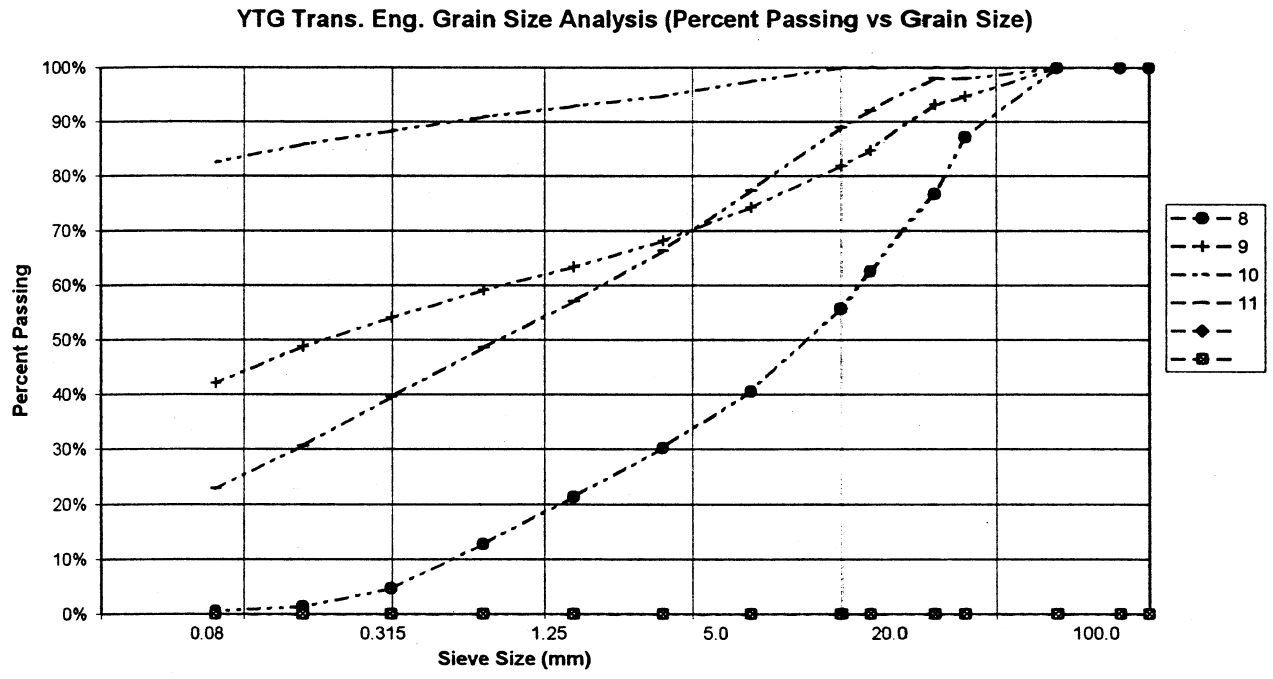


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)

HOLE No.: 631-03

DATE COMP: 2002/02/02

FIELD NO:	8	9	10	11		
LAB NO:	8	9	10	11		
DEPTH:	0.4-1.0	2.0-2.3	3.0-3.5	4.0-4.3		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	87%	95%	100%	98%		
20.0	77%	93%	100%	98%		
12.5	63%	85%	100%	92%		
10.0	56%	82%	100%	89%		
5.0	41%	74%	98%	77%		
2.5	30%	68%	95%	66%		
1.25	21%	63%	93%	57%		
0.630	13%	59%	91%	49%		
0.315	5%	54%	88%	39%		
0.160	1%	49%	86%	31%		
0.080	1%	42%	83%	23%		
M.C.(%):	1%	20%	16%	9%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	59	26	2	23		
% SAND:	40	32	15	54		
% FINES:	1	42	83	23		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY SAND WITH GRAVEL (SM)	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)		



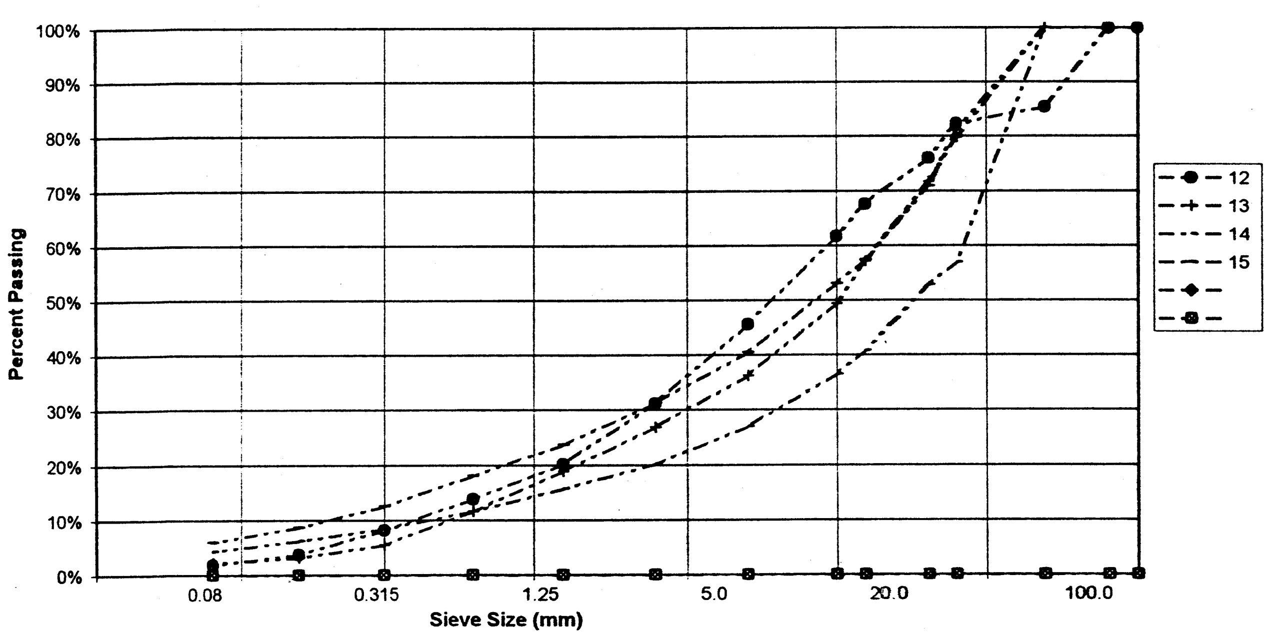
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)

HOLE No.: 431-04

DATE COMP: 2002/02/02

FIELD NO:	12	13	14	15		
LAB NO:	12	13	14	15		
DEPTH:	1.2-1.5	2.1-2.4	3.0-3.4	3.6-4.0		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	85%	100%	100%	100%		
25.0	82%	80%	57%	81%		
20.0	76%	72%	53%	71%		
12.5	68%	57%	41%	57%		
10.0	62%	49%	37%	53%		
5.0	46%	36%	27%	40%		
2.5	31%	27%	20%	31%		
1.25	20%	19%	16%	24%		
0.630	14%	12%	12%	18%		
0.315	8%	6%	8%	13%		
0.160	4%	3%	6%	9%		
0.080	2%	2%	4%	6%		
M.C.(%):	2%	2%	3%	4%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	54	64	73	60		
% SAND:	44	34	23	35		
% FINES:	2	2	4	6		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED GRAVEL WITH SAND (GW)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



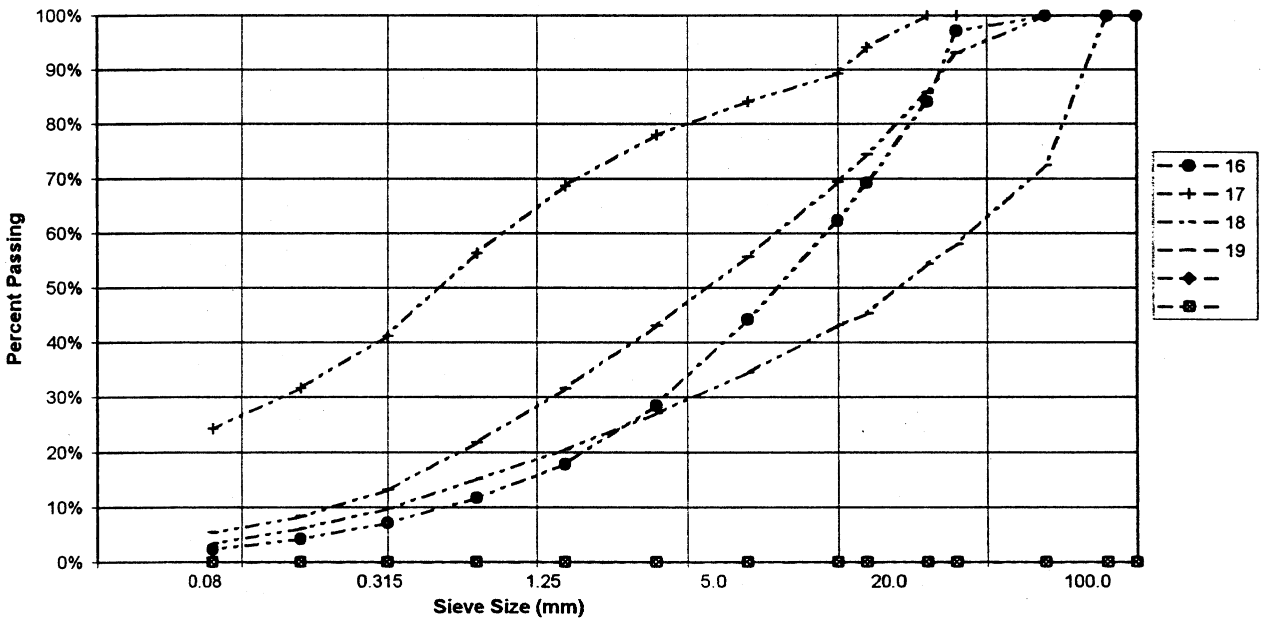
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)

HOLE No.: 631-05

DATE COMP: 2002/02/02

FIELD NO:	16	17	18	19		
LAB NO:	16	17	18	19		
DEPTH:	1.2-1.5	2.1-2.4	3.0-3.4	4.0-4.4		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	72%	100%		
25.0	97%	100%	58%	93%		
20.0	84%	100%	54%	86%		
12.5	69%	94%	45%	74%		
10.0	62%	89%	43%	69%		
5.0	44%	84%	34%	56%		
2.5	28%	78%	27%	43%		
1.25	18%	69%	21%	32%		
0.630	12%	56%	15%	22%		
0.315	7%	41%	10%	13%		
0.160	4%	32%	6%	8%		
0.080	2%	24%	3%	5%		
M.C.(%):	2%	63%	3%	4%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	56	16	66	44		
% SAND:	42	60	31	50		
% FINES:	2	24	3	5		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



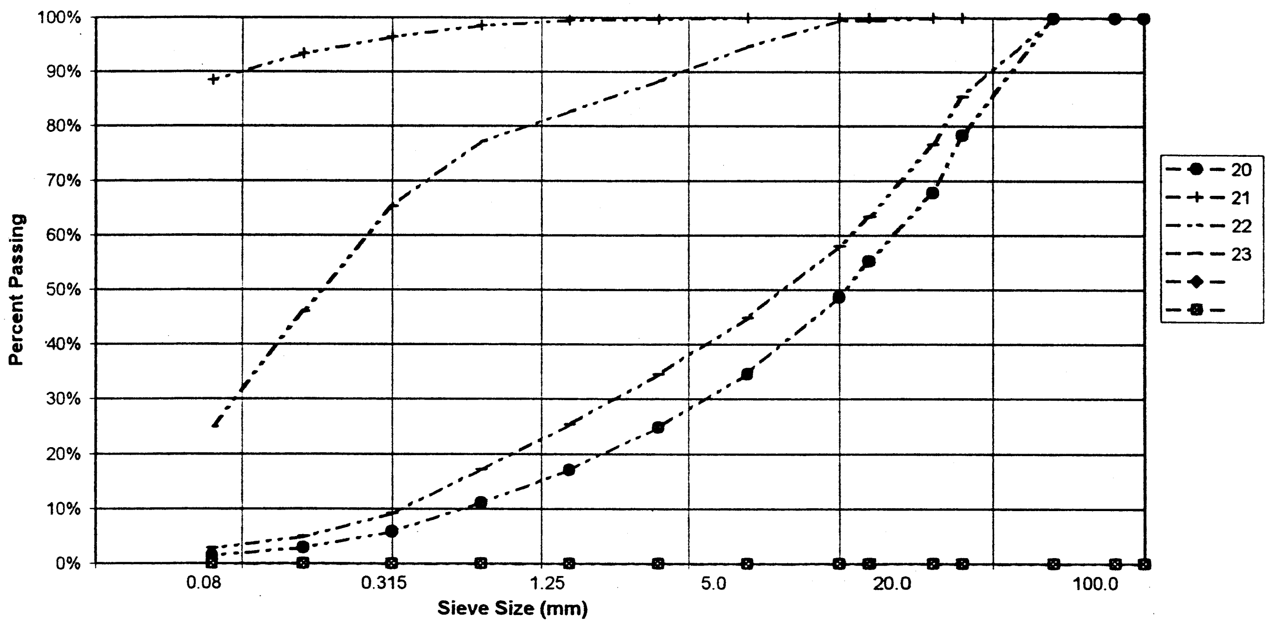
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)

HOLE No.: 631-06

DATE COMP: 2002/02/02

FIELD NO:	20	21	22	23		
LAB NO:	20	21	22	23		
DEPTH:	1.2-1.5	2.1-2.5	2.5-3.5	4.0-4.4		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	78%	100%	100%	85%		
20.0	68%	100%	100%	77%		
12.5	55%	100%	100%	63%		
10.0	49%	100%	100%	58%		
5.0	35%	100%	95%	45%		
2.5	25%	100%	88%	34%		
1.25	17%	99%	83%	25%		
0.630	11%	99%	77%	17%		
0.315	6%	97%	65%	9%		
0.160	3%	93%	46%	5%		
0.080	1%	88%	25%	3%		
M.C.(%):	2%	42%	15%	2%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	65	0	5	55		
% SAND:	33	12	70	42		
% FINES:	1	88	25	3		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	SILT (ML)	SILTY SAND (SM)	POORLY GRADED GRAVEL WITH SAND (GP)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

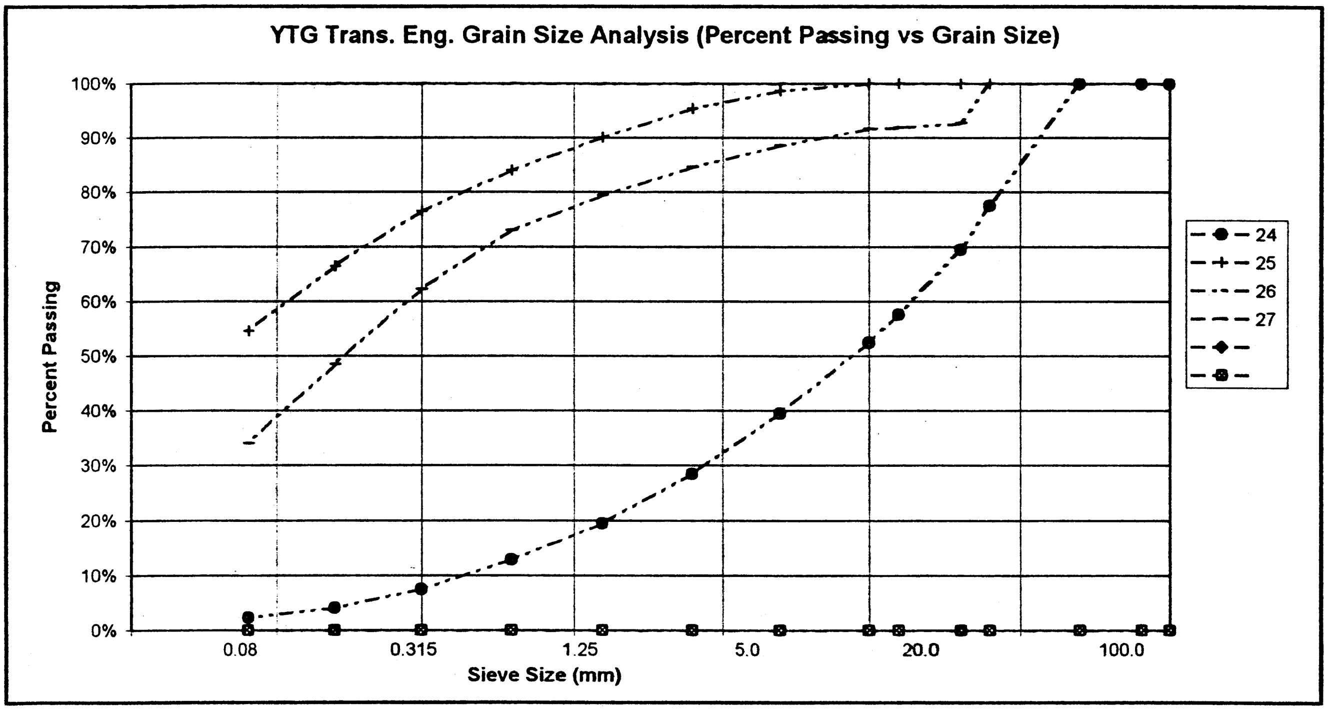


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)

HOLE No.: 631-07

DATE COMP: 2002/02/02

FIELD NO:	24	25	26	27		
LAB NO:	24	25	Lost	27		
DEPTH:	0.4-0.8	2.5-2.8	3.4-3.8	4.2-4.6		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	78%	100%	100%	100%		
20.0	70%	100%	100%	93%		
12.5	58%	100%	100%	92%		
10.0	52%	100%	100%	92%		
5.0	40%	99%	100%	89%		
2.5	28%	95%	100%	85%		
1.25	19%	90%	100%	79%		
0.630	13%	84%	100%	73%		
0.315	7%	77%	100%	62%		
0.160	4%	66%	100%	48%		
0.080	2%	55%	100%	34%		
M.C.(%):	2%	24%	25%	15%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	60	1	0	11		
% SAND:	37	44	0	55		
% FINES:	2	55	[redacted]	34		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	SANDY SILT (ML)	[redacted]	SILTY SAND (SM)		

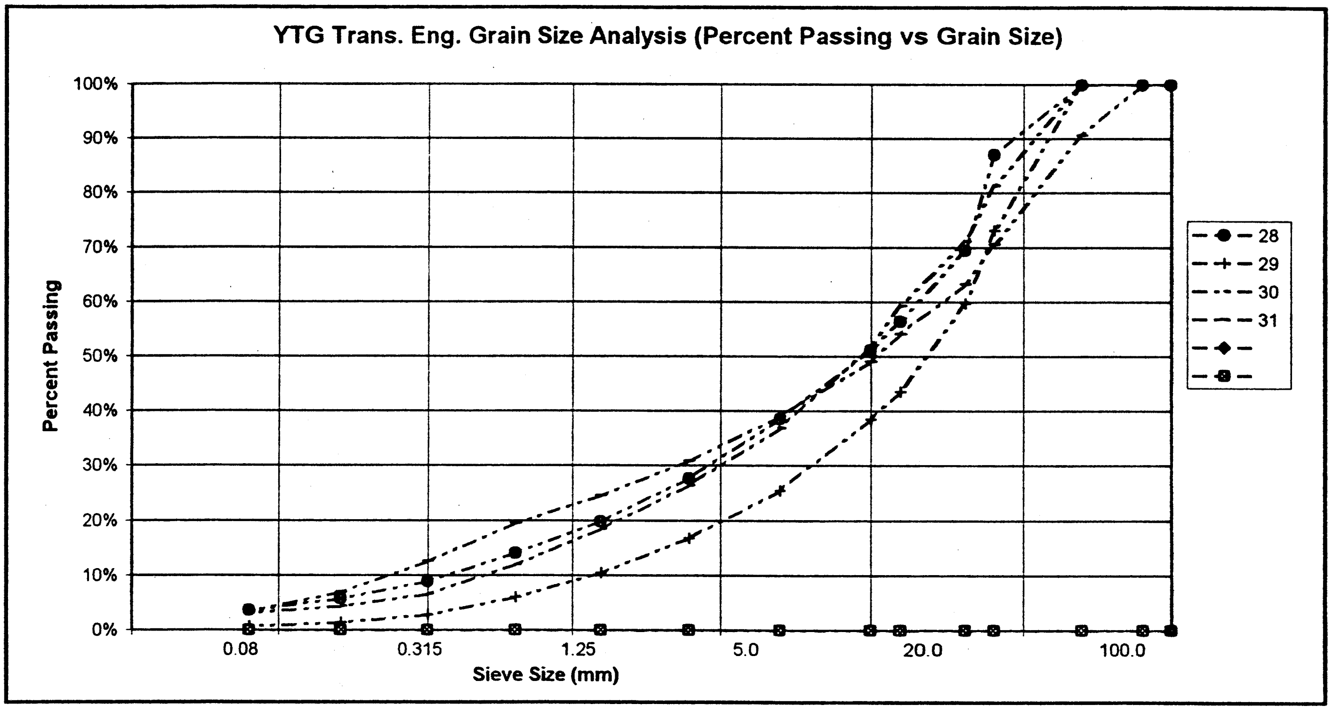

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)

HOLE No.: 631-08

DATE COMP: 2002/02/02

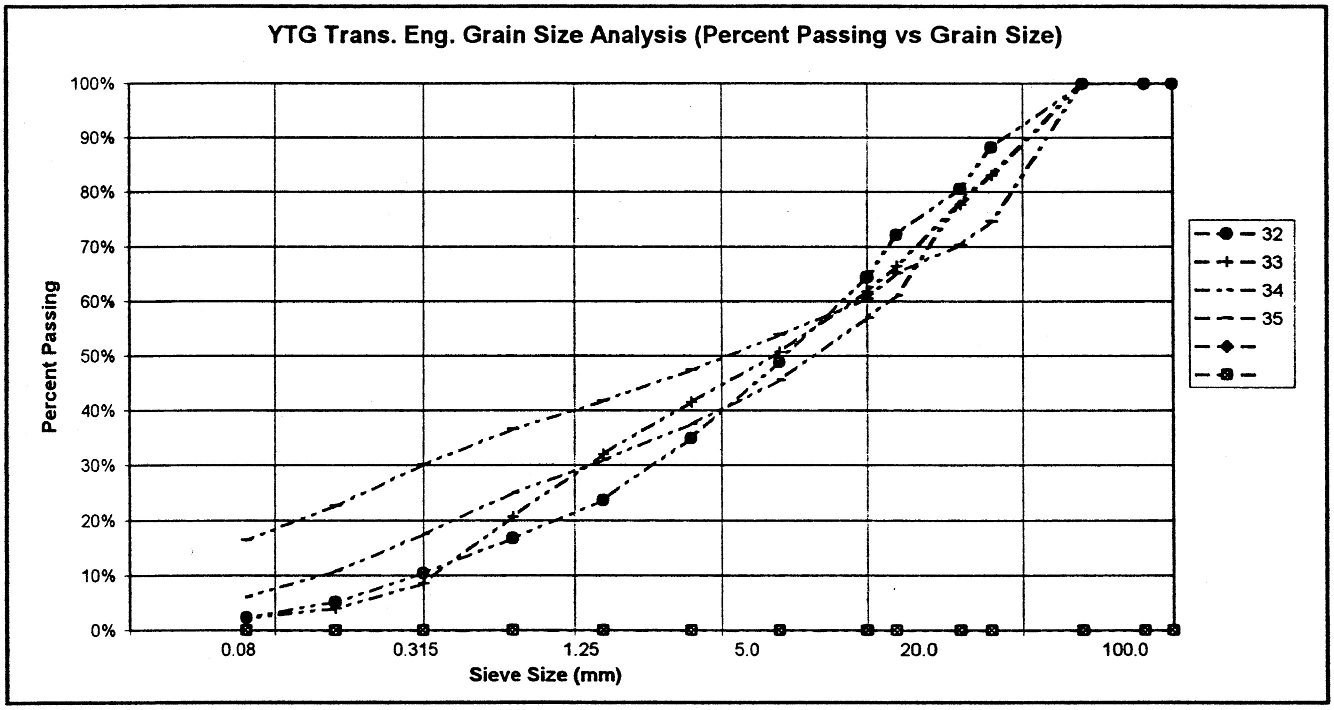
FIELD NO:	28	29	30	31		
LAB NO:	28	29	30	31		
DEPTH:	0.8-1.2	1.8-2.1	2.8-3.1	4.0-4.5		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	91%		
25.0	87%	73%	81%	71%		
20.0	69%	60%	71%	63%		
12.5	57%	44%	59%	54%		
10.0	51%	39%	52%	49%		
5.0	39%	25%	37%	39%		
2.5	28%	17%	26%	31%		
1.25	20%	10%	18%	25%		
0.630	14%	6%	12%	19%		
0.315	9%	3%	7%	13%		
0.160	6%	1%	4%	7%		
0.080	4%	1%	3%	3%		
M.C.(%):	2%	1%	3%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	61	75	63	61		
% SAND:	35	25	34	36		
% FINES:	4	1	3	3		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)		



PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)

HOLE No.: 631-09
DATE COMP: 2002/02/02

FIELD NO:	32	33	34	35		
LAB NO:	32	33	34	35		
DEPTH:	0.6-1.0	1.8-2.1	2.9-3.2	4.0-4.5		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	88%	83%	83%	75%		
20.0	81%	78%	78%	70%		
12.5	72%	66%	61%	65%		
10.0	64%	62%	57%	60%		
5.0	49%	51%	46%	54%		
2.5	35%	42%	38%	47%		
1.25	24%	32%	31%	42%		
0.630	17%	21%	25%	37%		
0.315	10%	9%	18%	30%		
0.160	5%	4%	11%	23%		
0.080	2%	2%	6%	16%		
M.C.(%):	2%	2%	3%	10%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	51	49	54	46		
% SAND:	47	48	39	37		
% FINES:	2	2	6	16		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY GRAVEL WITH SAND (GM)		



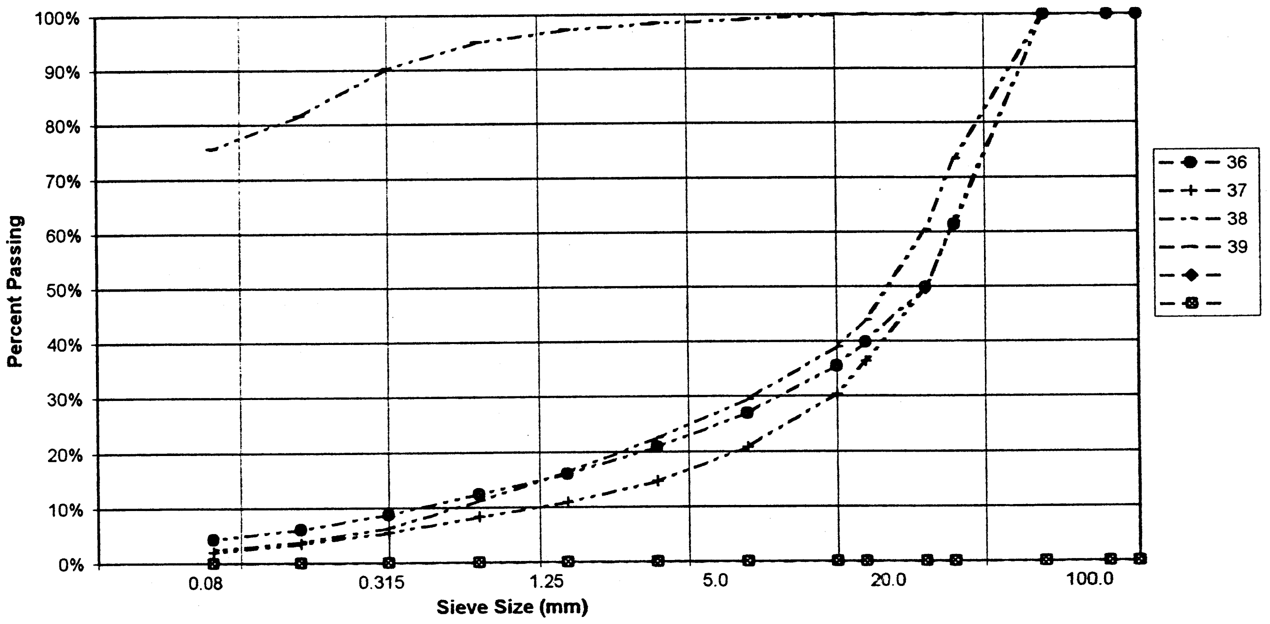
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)

HOLE No.: 631-10

DATE COMP: 2002/02/02

FIELD NO:	36	37	38	39		
LAB NO:	36	37	38	39		
DEPTH:	1.2-1.5	2.0-2.4	3.0-3.4	4.0-4.2		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	61%	62%	73%	100%		
20.0	50%	50%	60%	100%		
12.5	40%	36%	44%	100%		
10.0	36%	30%	39%	100%		
5.0	27%	21%	29%	99%		
2.5	21%	15%	22%	99%		
1.25	16%	11%	16%	97%		
0.630	12%	8%	11%	95%		
0.315	9%	6%	6%	90%		
0.160	6%	4%	4%	82%		
0.080	4%	2%	2%	76%		
M.C.(%):	3%	2%	2%	58%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	73	79	71	1		
% SAND:	23	19	27	24		
% FINES:	4	2	2	76		
CLASSIFICATION	WELL-GRADED GRAVEL WITH SAND (GW)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED GRAVEL WITH SAND (GW)	SILT WITH SAND (ML)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



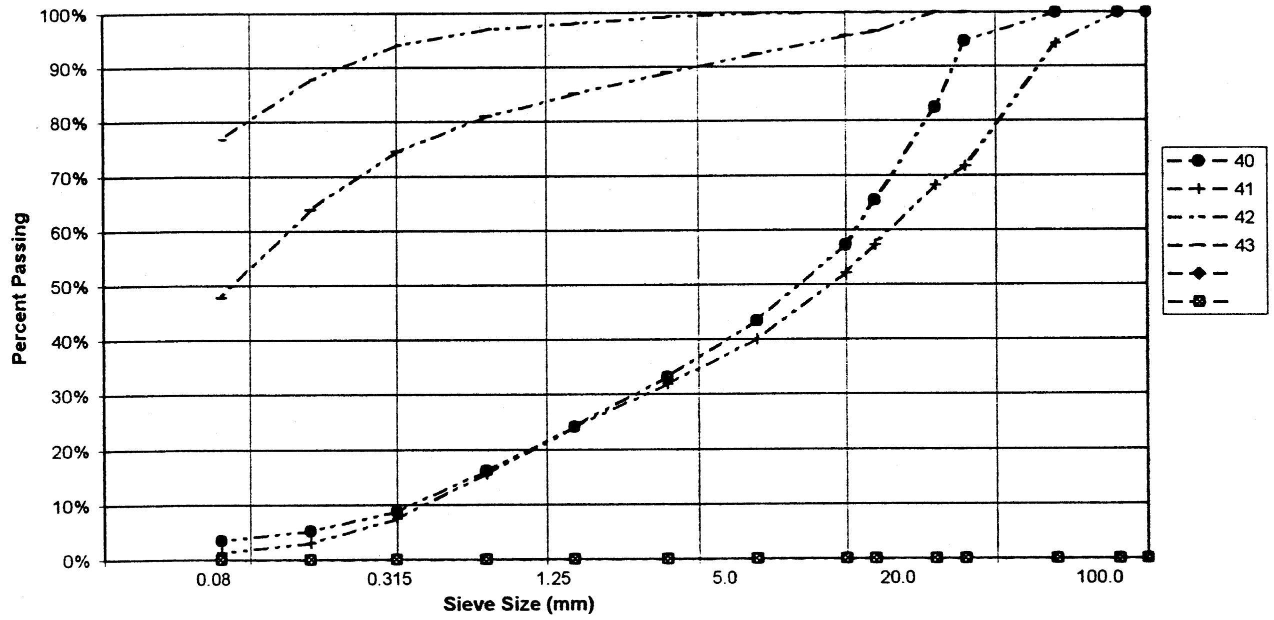
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)

HOLE No.: 631-11

DATE COMP: 2002/02/02

FIELD NO:	40	41	42	43		
LAB NO:	40	41	42	43		
DEPTH:	1.2-1.5	2.3-2.6	3.0-3.3	4.0-4.4		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	94%	100%	100%		
25.0	95%	72%	100%	100%		
20.0	83%	68%	100%	100%		
12.5	65%	57%	100%	96%		
10.0	57%	52%	100%	96%		
5.0	43%	40%	100%	92%		
2.5	33%	32%	99%	89%		
1.25	24%	24%	98%	85%		
0.630	16%	16%	97%	81%		
0.315	9%	8%	94%	75%		
0.160	5%	3%	88%	64%		
0.080	3%	1%	77%	48%		
M.C.(%):	2%	2%	33%	21%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	57	60	0	8		
% SAND:	40	39	23	45		
% FINES:	3	1	77	48		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	SILT WITH SAND (ML)	SILTY SAND (SM)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



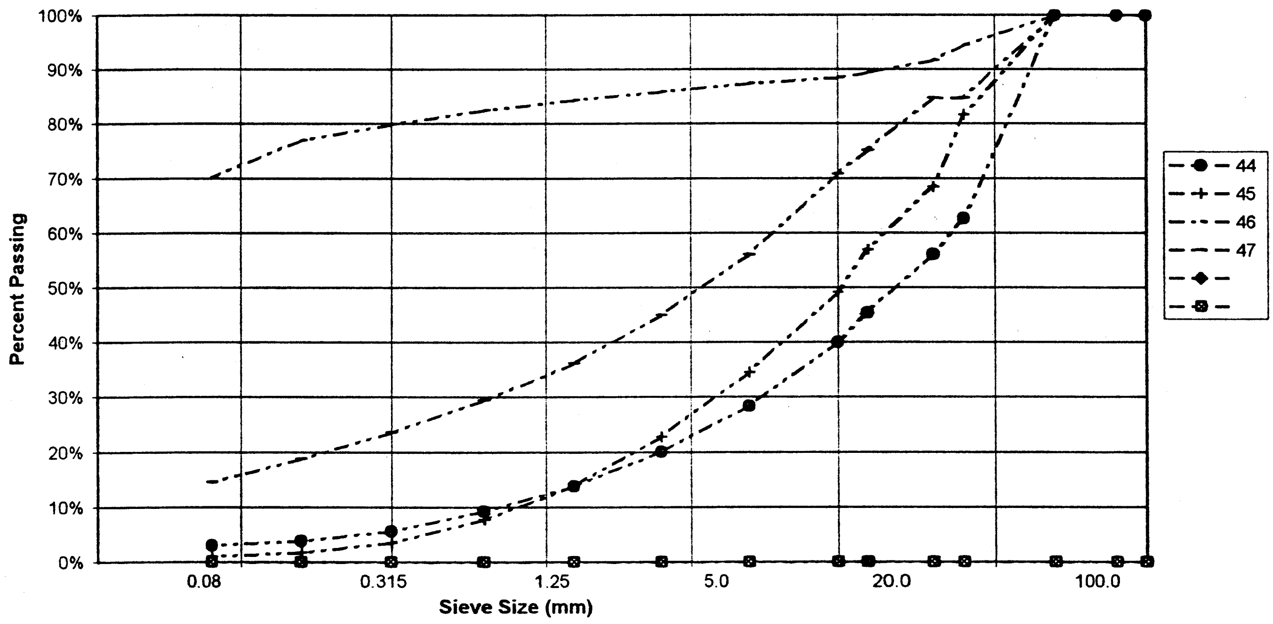
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)

HOLE No.: 631-12

DATE COMP: 2002/02/02

FIELD NO:	44	45	46	47		
LAB NO:	44	45	46	47		
DEPTH:	1.0-1.4	2.0-2.3	2.4-2.7	4.0-4.4		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	63%	82%	94%	85%		
20.0	56%	68%	92%	85%		
12.5	45%	57%	89%	75%		
10.0	40%	49%	88%	71%		
5.0	28%	34%	87%	56%		
2.5	20%	23%	86%	45%		
1.25	14%	14%	84%	36%		
0.630	9%	8%	82%	29%		
0.315	6%	4%	80%	24%		
0.160	4%	2%	77%	19%		
0.080	3%	1%	70%	15%		
M.C.(%):	2%	2%	34%	8%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	72	66	13	44		
% SAND:	25	33	17	41		
% FINES:	3	1	70	15		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	SILT WITH SAND (ML)	SILTY GRAVEL WITH SAND (GM)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



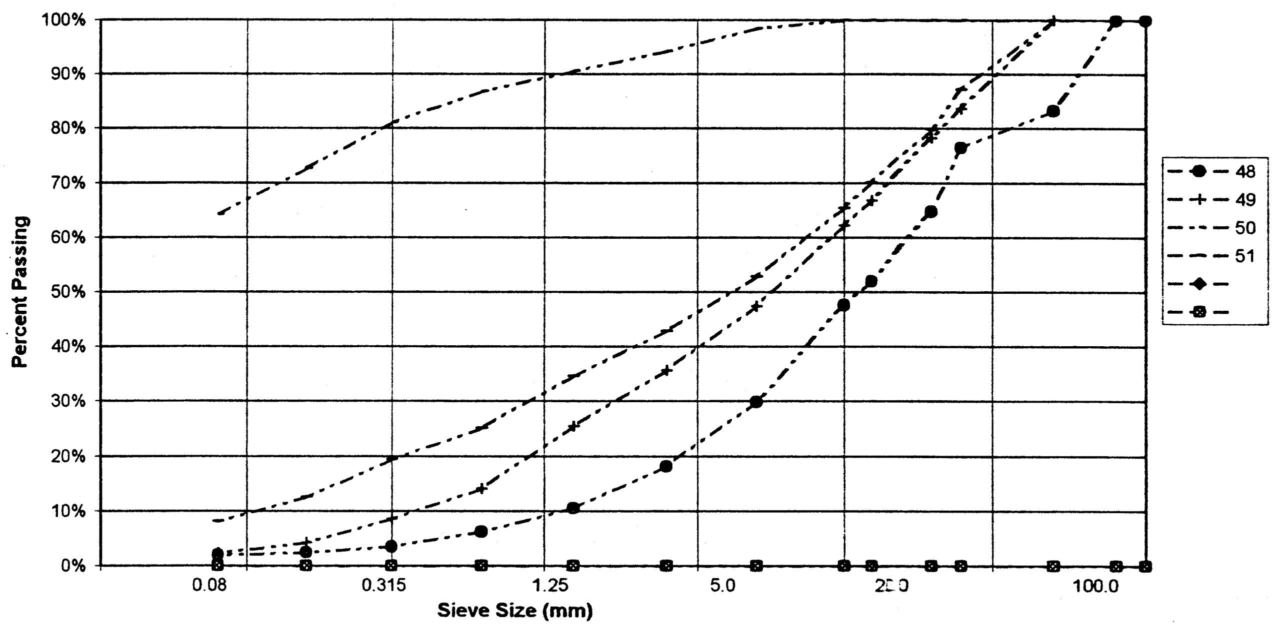
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)

HOLE No.: 631-13

DATE COMP: 2002/02/02

FIELD NO:	48	49	50	51		
LAB NO:	48	49	50	51		
DEPTH:	1.1-1.4	2.1-2.4	3.0-3.2	4.2-4.6		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	83%	100%	100%	100%		
25.0	77%	84%	100%	87%		
20.0	65%	78%	100%	80%		
12.5	52%	67%	100%	70%		
10.0	48%	62%	100%	65%		
5.0	30%	47%	98%	53%		
2.5	18%	36%	94%	43%		
1.25	11%	25%	91%	35%		
0.630	6%	14%	87%	25%		
0.315	3%	9%	81%	19%		
0.160	2%	4%	73%	13%		
0.080	2%	2%	64%	8%		
M.C.(%):	1%	2%	50%	4%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	70	53	2	47		
% SAND:	28	45	34	45		
% FINES:	2	2	64	8		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	SANDY SILT (ML)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

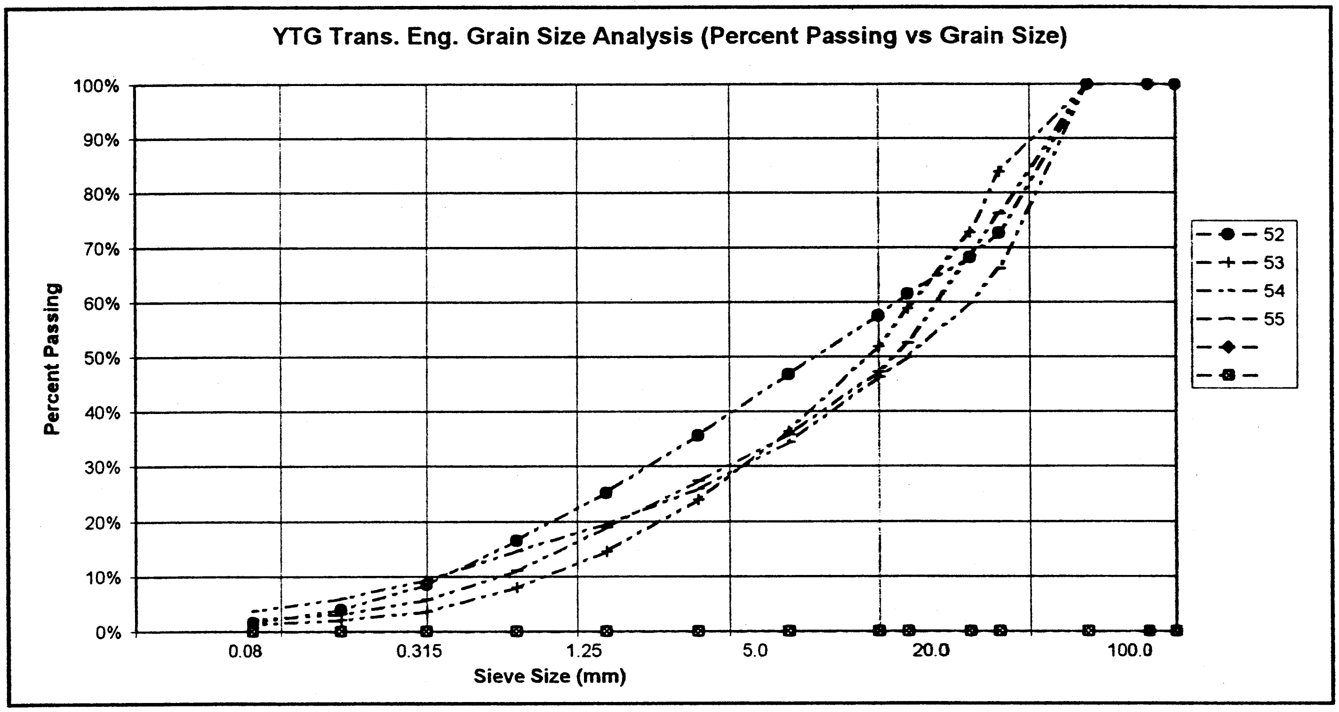


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)

HOLE No.: 631-14

DATE COMP: 2002/02/02

FIELD NO:	52	53	54	55		
LAB NO:	52	53	54	55		
DEPTH:	1.0-1.3	1.9-2.2	2.9-3.2	3.8-4.2		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	73%	84%	66%	76%		
20.0	68%	73%	60%	69%		
12.5	62%	59%	50%	53%		
10.0	58%	52%	46%	47%		
5.0	47%	36%	34%	36%		
2.5	36%	24%	26%	27%		
1.25	25%	15%	20%	19%		
0.630	17%	8%	15%	11%		
0.315	9%	4%	9%	6%		
0.160	4%	2%	6%	3%		
0.080	2%	1%	4%	2%		
M.C.(%):	2%	2%	3%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	53	64	66	64		
% SAND:	45	35	31	34		
% FINES:	2	1	4	2		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)		

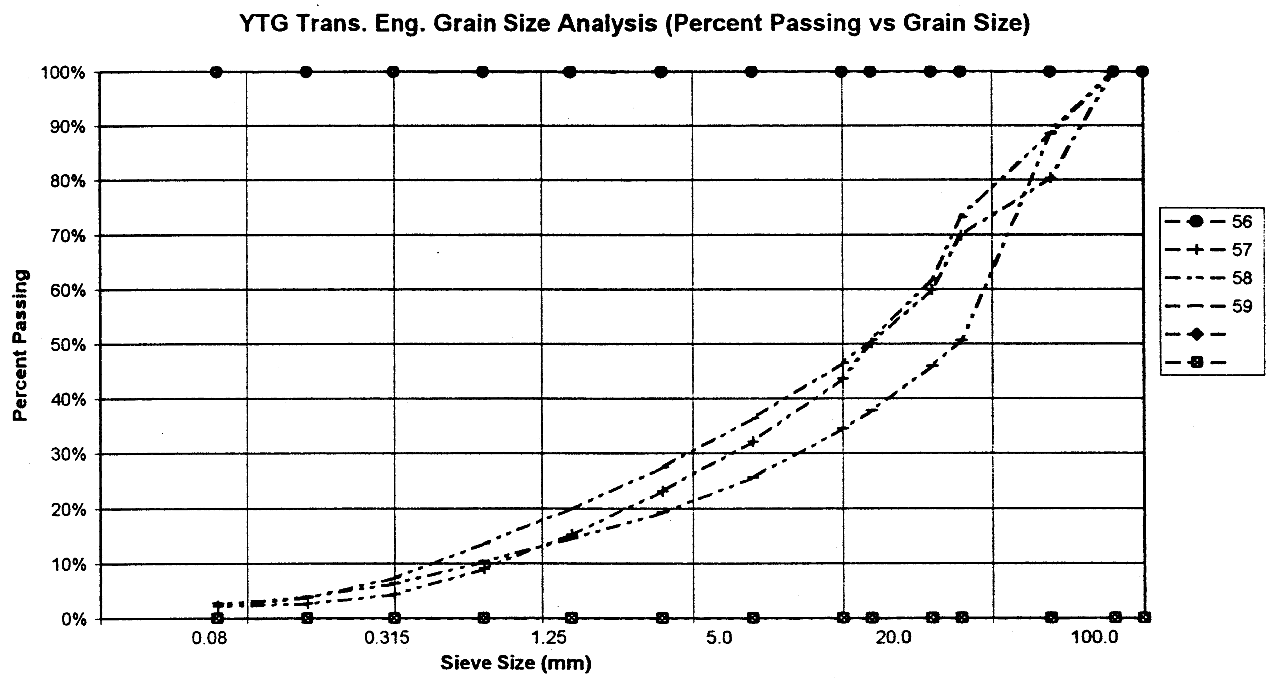

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)

HOLE No.: 631-15

DATE COMP: 2002/02/02

FIELD NO:	56	57	58	59		
LAB NO:	Lost	57	58	59		
DEPTH:	1.2-1.5	2.2-2.5	3.2-3.5	4.1-4.4		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	80%	89%	89%		
25.0	100%	70%	73%	51%		
20.0	100%	60%	62%	46%		
12.5	100%	50%	51%	38%		
10.0	100%	44%	46%	35%		
5.0	100%	32%	36%	26%		
2.5	100%	23%	27%	19%		
1.25	100%	15%	20%	15%		
0.630	100%	9%	14%	10%		
0.315	100%	4%	7%	6%		
0.160	100%	3%	4%	4%		
0.080	100%	2%	2%	3%		
M.C.(%):	2%	2%	4%	1%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	68	64	74		
% SAND:	0	30	34	23		
% FINES:	[redacted]	2	2	3		
CLASSIFICATION	[redacted]	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)		



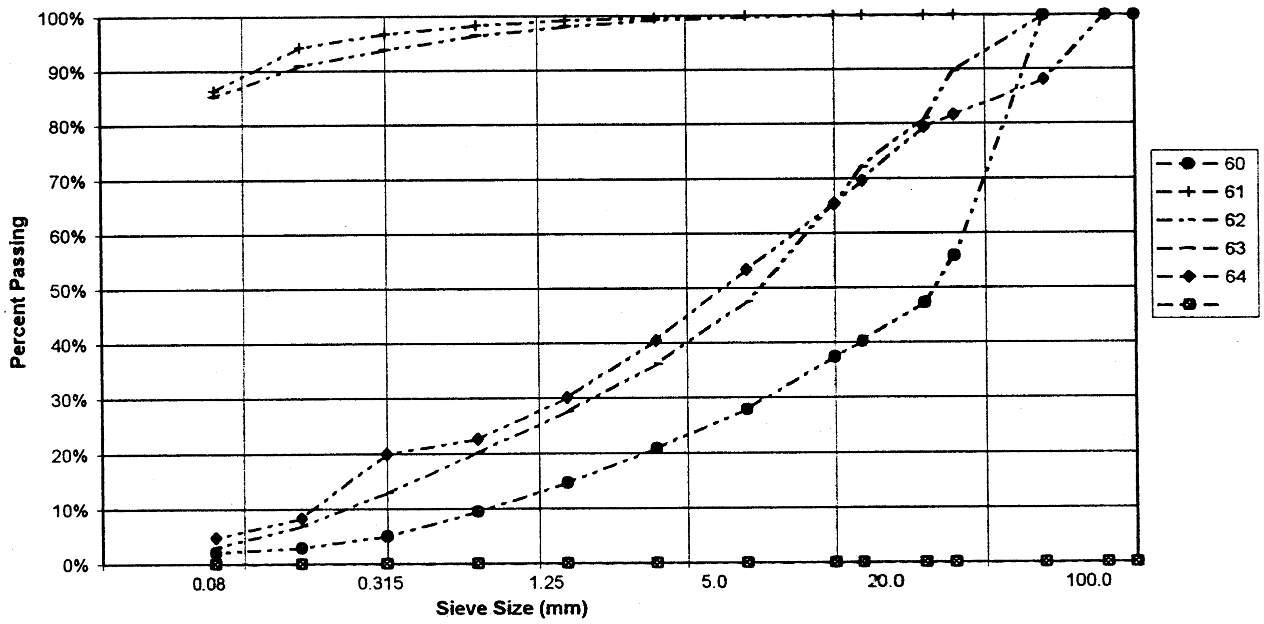
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)

HOLE No.: 631-16

DATE COMP: 2002/02/02

FIELD NO:	60	61	62	63	64	
LAB NO:	60	61	62	63	64	
DEPTH:	1.0-1.3	1.9-2.2	2.2-2.5	3.2-3.5	4.2-4.6	
TYPE:	BULK	BULK	BULK	BULK	BULK	#N/A
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	
100.0	100%	100%	100%	100%	100%	
80.0	100%	100%	100%	100%	100%	
50.0	100%	100%	100%	100%	88%	
25.0	56%	100%	90%	100%	82%	
20.0	47%	100%	81%	100%	79%	
12.5	40%	100%	72%	100%	70%	
10.0	37%	100%	65%	100%	65%	
5.0	28%	100%	48%	100%	53%	
2.5	21%	100%	36%	99%	40%	
1.25	15%	99%	28%	98%	30%	
0.630	10%	98%	20%	96%	23%	
0.315	5%	97%	13%	94%	20%	
0.160	3%	94%	7%	91%	8%	
0.080	2%	86%	3%	85%	5%	
M.C.(%):	2%	40%	2%	36%	3%	
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	
% GRAVEL:	72	0	52	0	47	
% SAND:	26	14	45	14	49	
% FINES:	2	86	3	85	5	
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	SILT (ML)	POORLY GRADED GRAVEL WITH SAND (GP)	SILT (ML)	WELL-GRADED SAND WITH GRAVEL (SW)	

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

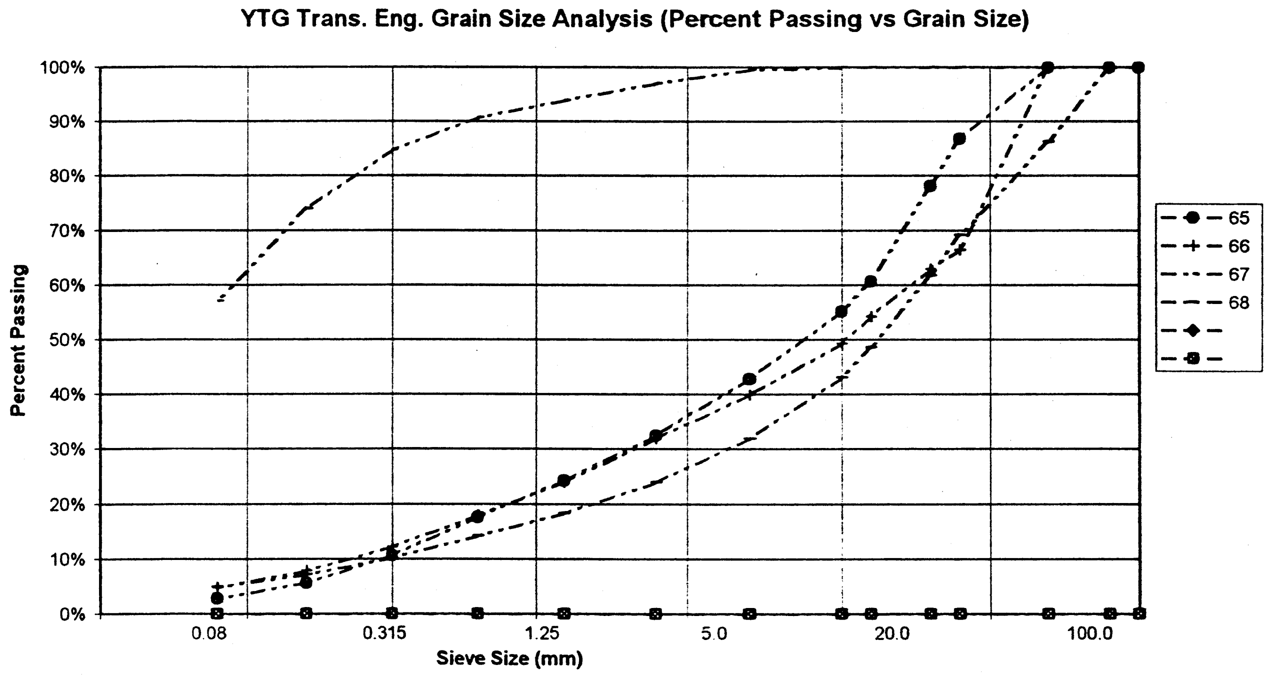


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)

HOLE No.: 631-17

DATE COMP: 2002/02/02

FIELD NO:	65	66	67	68		
LAB NO:	65	66	67	68		
DEPTH:	1.1-1.4	1.8-2.1	2.8-3.2	4.0-4.4		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	86%		
25.0	87%	66%	100%	69%		
20.0	78%	63%	100%	62%		
12.5	61%	54%	100%	49%		
10.0	55%	49%	100%	43%		
5.0	43%	40%	100%	32%		
2.5	32%	32%	97%	24%		
1.25	24%	24%	94%	18%		
0.630	18%	18%	91%	14%		
0.315	11%	12%	85%	10%		
0.160	6%	8%	74%	7%		
0.080	3%	5%	57%	5%		
M.C.(%):	2%	3%	33%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	57	60	0	68		
% SAND:	40	35	43	27		
% FINES:	3	5	57	5		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	SANDY SILT (ML)	POORLY GRADED GRAVEL WITH SAND (GP)		

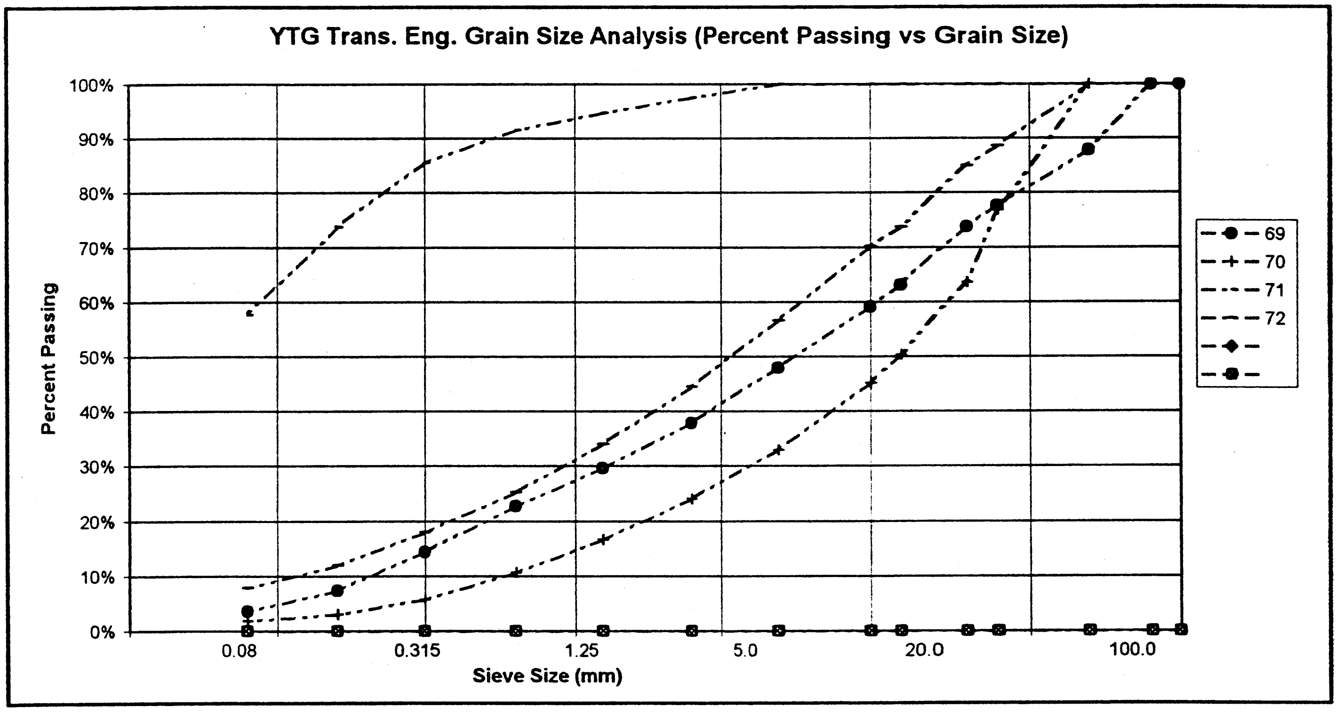


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)

HOLE No.: 631-18

DATE COMP: 2002/02/02

FIELD NO:	69	70	71	72		
LAB NO:	69	70	71	72		
DEPTH:	1.2-1.5	2.4-2.7	3.6-3.8	4.2-4.5		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	88%	100%	100%	100%		
25.0	78%	77%	100%	89%		
20.0	74%	64%	100%	85%		
12.5	63%	50%	100%	74%		
10.0	59%	45%	100%	70%		
5.0	48%	33%	100%	57%		
2.5	38%	24%	97%	44%		
1.25	30%	17%	95%	34%		
0.630	23%	11%	92%	25%		
0.315	14%	6%	86%	18%		
0.160	7%	3%	74%	12%		
0.080	4%	2%	58%	8%		
M.C.(%):	3%	2%	43%	5%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	52	67	0	43		
% SAND:	44	31	42	49		
% FINES:	4	2	58	8		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	SANDY SILT (ML)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)		



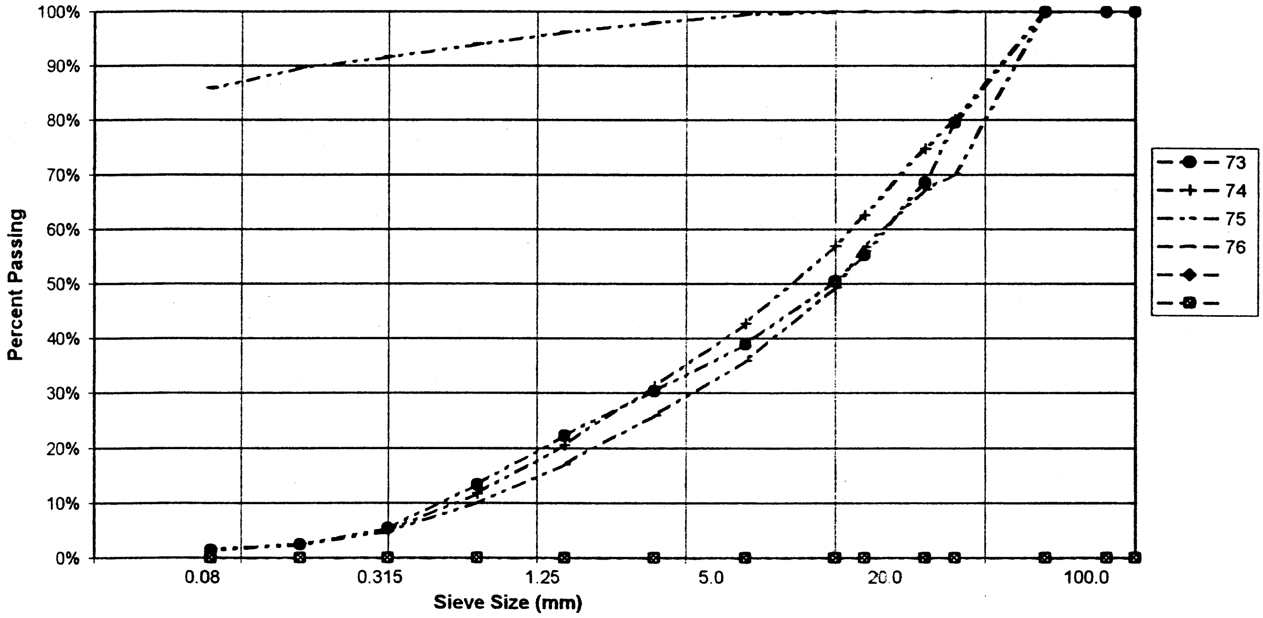
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)

HOLE No.: 631-19

DATE COMP: 2002/02/02

FIELD NO:	73	74	75	76		
LAB NO:	73	74	75	76		
DEPTH:	1.0-1.3	2.0-2.3	2.5-3.2	4.0-4.4		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	80%	80%	70%	100%		
20.0	68%	75%	67%	100%		
12.5	55%	63%	57%	100%		
10.0	51%	57%	49%	100%		
5.0	39%	43%	36%	99%		
2.5	30%	31%	26%	98%		
1.25	22%	21%	17%	96%		
0.630	13%	12%	10%	94%		
0.315	5%	5%	5%	92%		
0.160	3%	2%	3%	90%		
0.080	1%	1%	2%	86%		
M.C.(%):	2%	2%	2%	43%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	61	57	64	1		
% SAND:	38	41	34	14		
% FINES:	1	1	2	86		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	SILT (ML)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



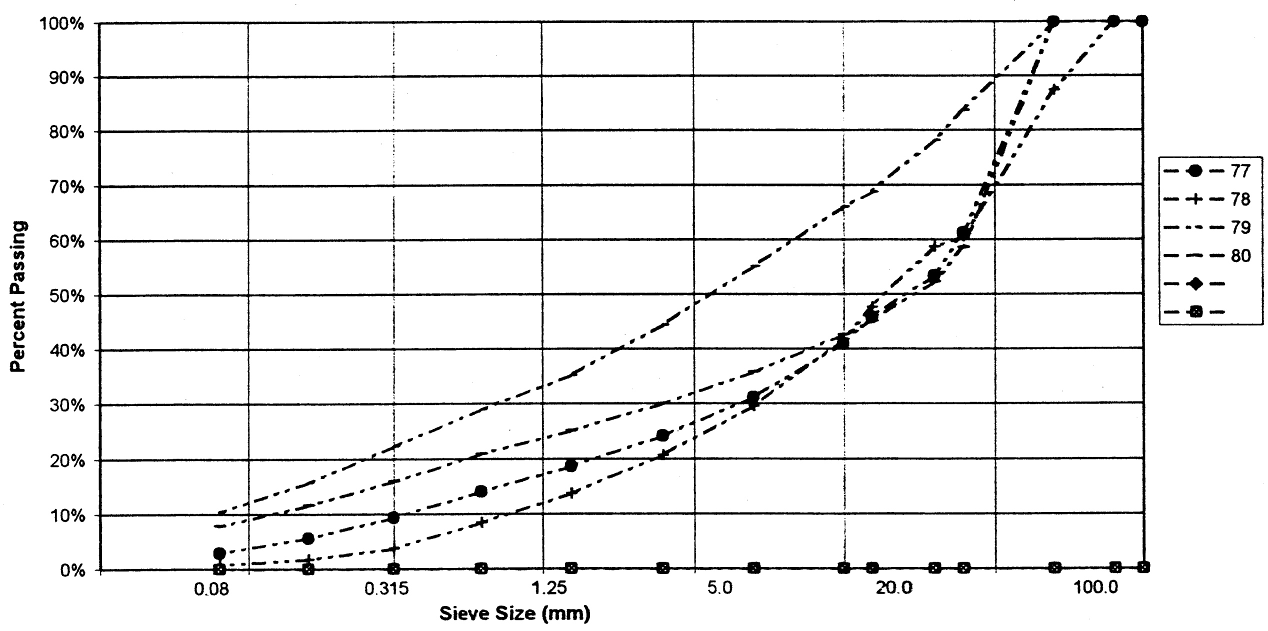
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)

HOLE No.: 631-20

DATE COMP: 2002/02/02

FIELD NO:	77	78	79	80		
LAB NO:	77	78	79	80		
DEPTH:	1.1-1.4	2.1-2.4	3.2-3.6	4.2-4.6		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	87%	100%	100%		
25.0	61%	61%	84%	59%		
20.0	53%	59%	78%	52%		
12.5	46%	48%	69%	45%		
10.0	41%	42%	66%	43%		
5.0	31%	30%	55%	36%		
2.5	24%	21%	44%	30%		
1.25	19%	14%	35%	25%		
0.630	14%	8%	29%	21%		
0.315	9%	4%	22%	16%		
0.160	6%	2%	16%	12%		
0.080	3%	1%	10%	8%		
M.C.(%):	2%	2%	6%	5%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	69	70	45	64		
% SAND:	28	29	45	28		
% FINES:	3	1	10	8		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

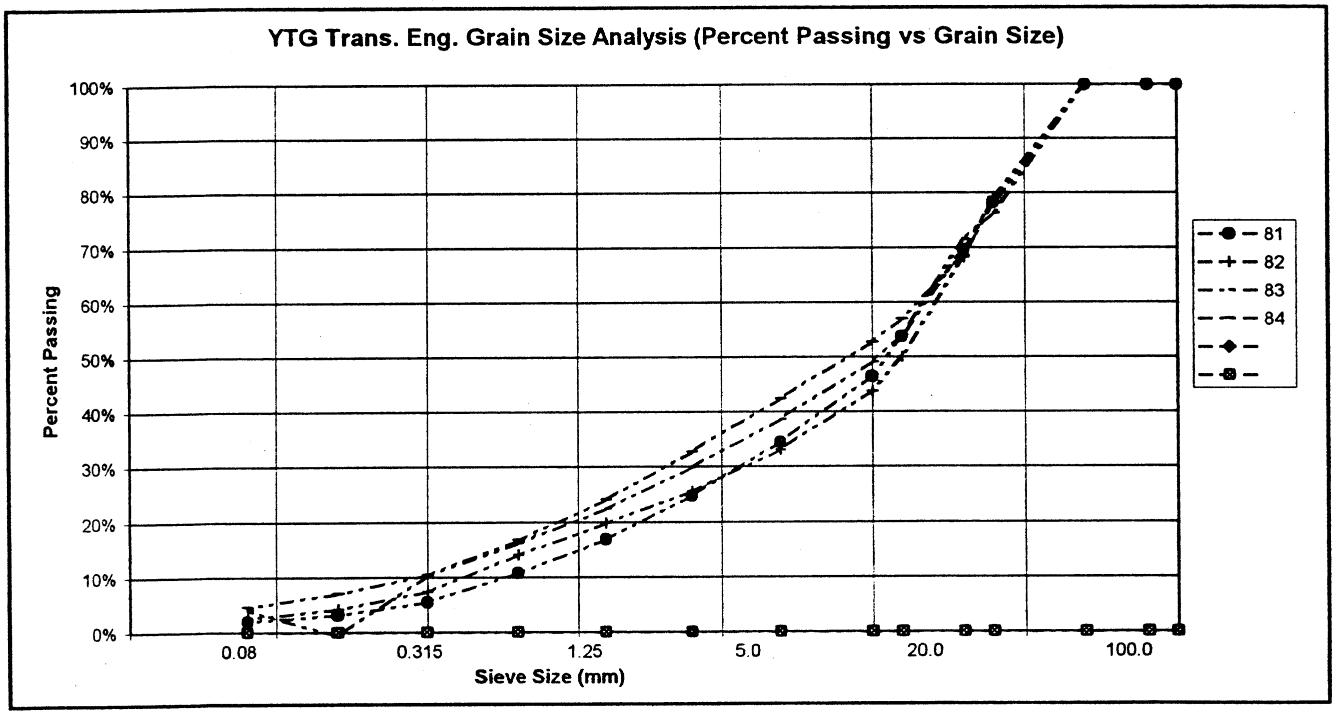


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)

HOLE No.: 631-21

DATE COMP: 2002/02/02

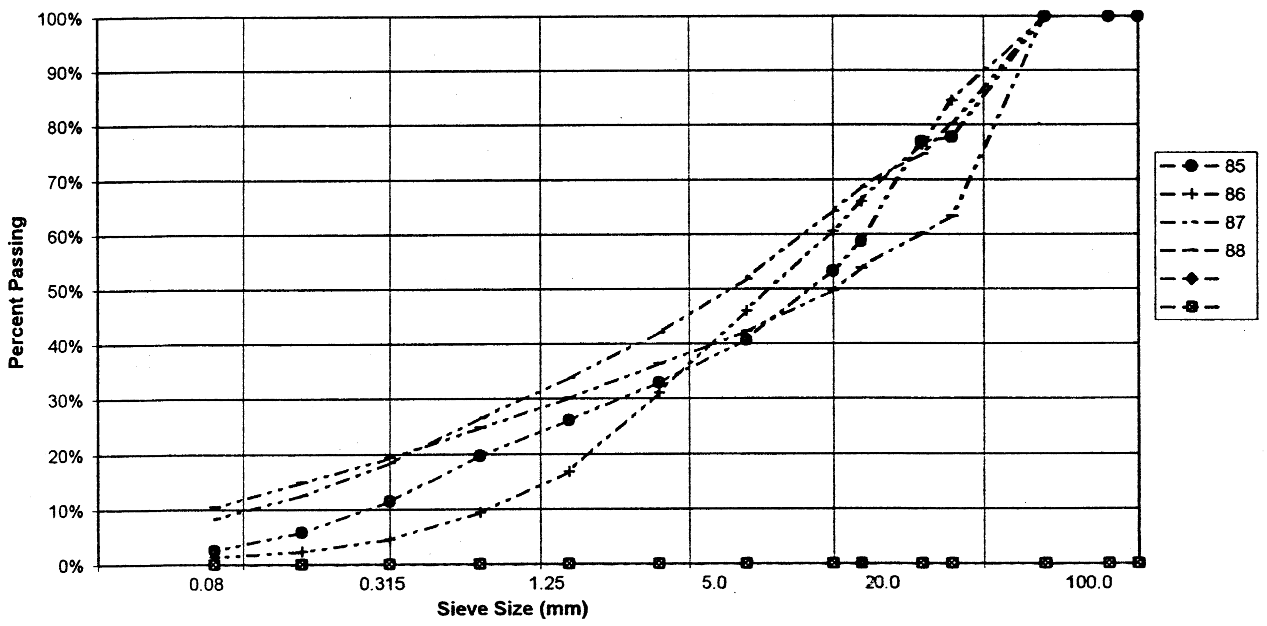
FIELD NO:	81	82	83	84		
LAB NO:	81	82	83	84		
DEPTH:	1.0-1.3	1.8-2.1	3.3-3.6	4.0-4.2		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	78%	79%	76%	78%		
20.0	70%	68%	72%	68%		
12.5	54%	50%	54%	57%		
10.0	47%	44%	49%	53%		
5.0	34%	33%	39%	42%		
2.5	25%	26%	30%	33%		
1.25	17%	20%	22%	24%		
0.630	11%	14%	16%	17%		
0.315	5%	7%	10%	10%		
0.160	3%	4%	-1%	7%		
0.080	2%	3%	4%	5%		
M.C.(%):	2%	2%	3%	4%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	66	67	61	58		
% SAND:	32	30	34	38		
% FINES:	2	3	4	5		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)		



PROJECT NUMBER: 092-202101-0361-1
HOLE No.: 631-22
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)
DATE COMP: 2002/02/02

FIELD NO:	85	86	87	88		
LAB NO:	85	86	87	88		
DEPTH:	1.2-1.5	2.2-2.5	3.5-3.8	4.2-4.5		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	78%	84%	80%	63%		
20.0	77%	76%	75%	60%		
12.5	59%	66%	69%	54%		
10.0	53%	61%	64%	50%		
5.0	41%	46%	52%	42%		
2.5	33%	31%	42%	36%		
1.25	26%	17%	34%	30%		
0.630	20%	9%	27%	25%		
0.315	12%	5%	18%	19%		
0.160	6%	2%	13%	15%		
0.080	3%	1%	8%	10%		
M.C.(%):	2%	2%	6%	8%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	59	54	48	58		
% SAND:	38	45	43	32		
% FINES:	3	1	8	10		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

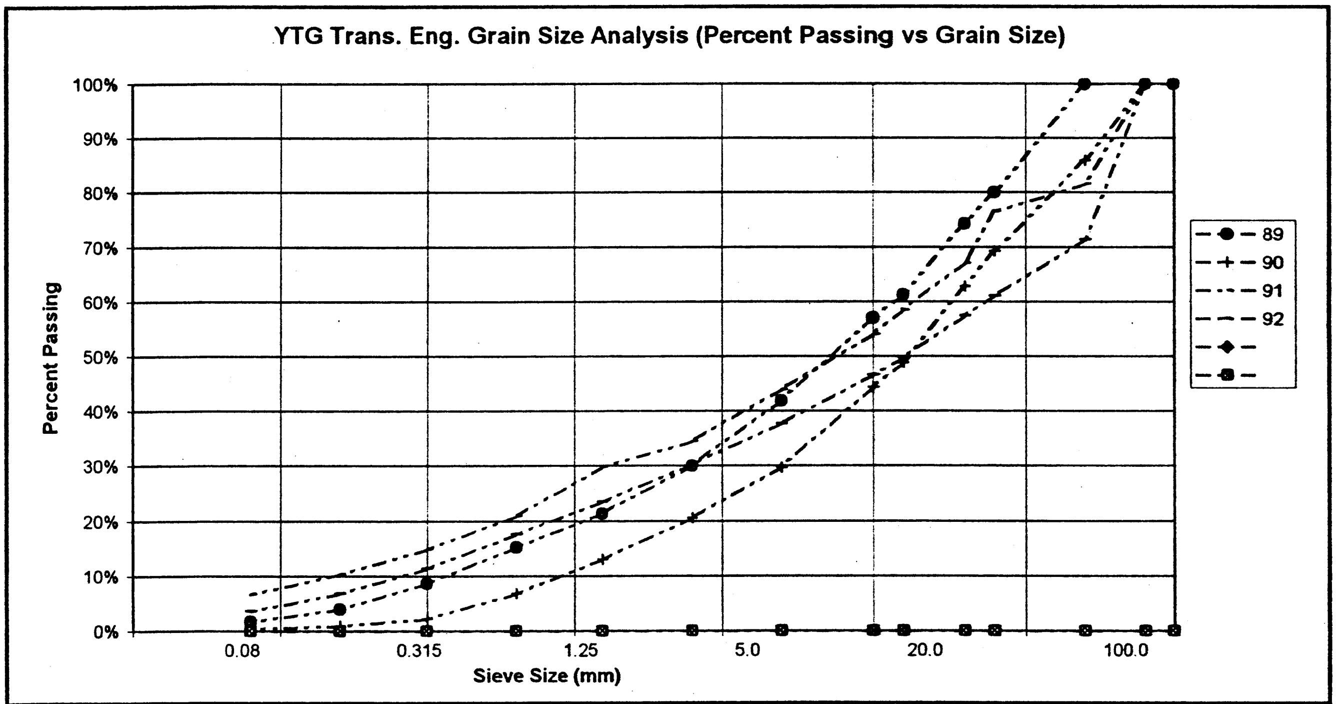


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)

HOLE No.: 631-23

DATE COMP: 2002/02/02

FIELD NO:	89	90	91	92		
LAB NO:	89	90	91	92		
DEPTH:	1.2-1.5	2.1-2.4	3.5-3.7	4.2-4.4		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	86%	82%	71%		
25.0	80%	69%	77%	61%		
20.0	74%	63%	67%	57%		
12.5	61%	49%	58%	50%		
10.0	57%	44%	54%	47%		
5.0	42%	30%	44%	38%		
2.5	30%	21%	34%	30%		
1.25	21%	13%	30%	24%		
0.630	15%	7%	21%	18%		
0.315	9%	2%	15%	11%		
0.160	4%	1%	10%	7%		
0.080	2%	0%	7%	4%		
M.C.(%):	2%	1%	4%	4%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	58	70	56	62		
% SAND:	40	29	37	34		
% FINES:	2	0	7	4		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)		


YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

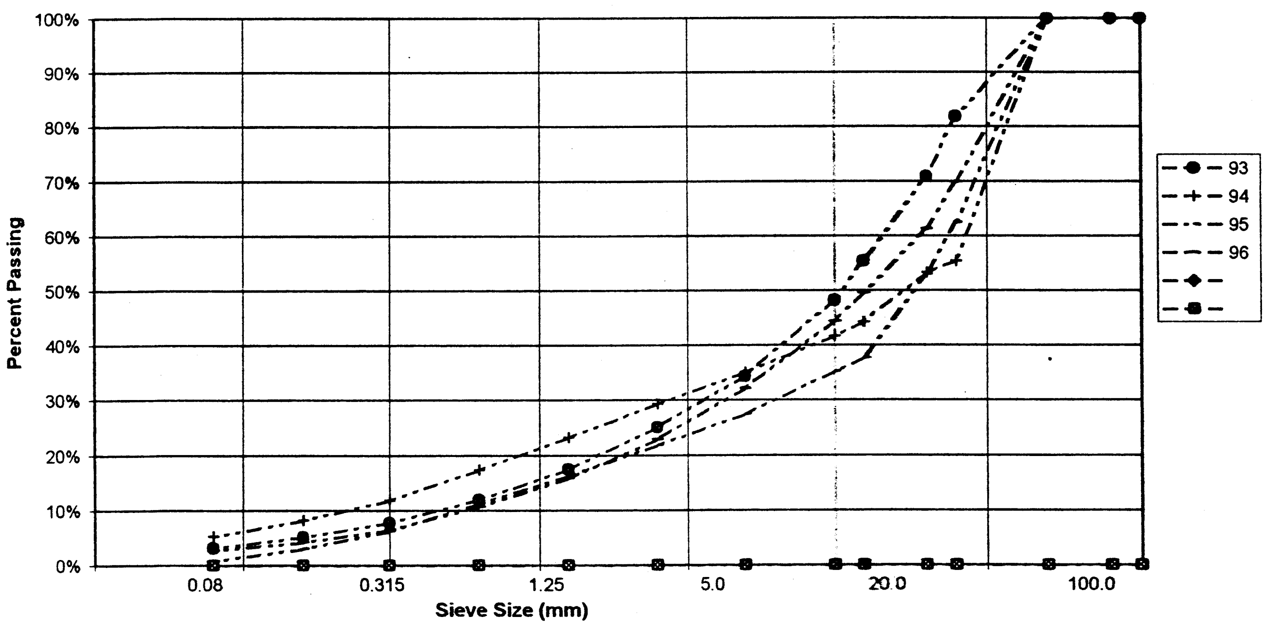
PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)

HOLE No.: 631-24

DATE COMP: 2002/02/02

FIELD NO:	93	94	95	96		
LAB NO:	93	94	95	96		
DEPTH:	1.5-1.8	2.2-2.5	3.5-3.7	4.3-4.5		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	82%	55%	62%	70%		
20.0	71%	53%	53%	61%		
12.5	55%	44%	38%	50%		
10.0	48%	42%	35%	44%		
5.0	34%	35%	27%	32%		
2.5	25%	29%	22%	23%		
1.25	18%	23%	16%	16%		
0.630	12%	17%	11%	11%		
0.315	8%	12%	6%	7%		
0.160	5%	8%	3%	4%		
0.080	3%	5%	1%	3%		
M.C.(%):	4%	3%	3%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	66	65	73	68		
% SAND:	31	30	27	29		
% FINES:	3	5	1	3		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	WELL-GRADED GRAVEL WITH SAND (GW)	POORLY GRADED GRAVEL WITH SAND (GP)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)

HOLE No.: 631-25
DATE COMP: 2002/02/02

FIELD NO:	97	98	99	100		
LAB NO:	97	98	99	100		
DEPTH:	1.2-1.5	2.0-3.1	3.5-3.8	4.2-4.5		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	77%	100%	100%	70%		
25.0	70%	69%	63%	27%		
20.0	61%	59%	53%	24%		
12.5	48%	49%	44%	23%		
10.0	44%	43%	41%	22%		
5.0	32%	35%	33%	21%		
2.5	24%	28%	27%	20%		
1.25	16%	22%	21%	18%		
0.630	10%	15%	16%	14%		
0.315	5%	9%	10%	11%		
0.160	4%	5%	6%	10%		
0.080	3%	3%	4%	7%		
M.C.(%):	2%	2%	2%	4%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	68	65	67	79		
% SAND:	29	32	30	14		
% FINES:	3	3	4	7		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT (GP-GM)